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**“An Osteopathic Approach
to Diagnosis and Treatment
of Hand, Wrist and and
Elbow Problems”**

Or..."Workshop on Elbow, Forearm, Wrist and Hand"

- **Objectives:**
- To give some Osteopathic concepts as to using skills in history, diagnosis and Osteopathic treatment to common problems.



Objectives

- With this workshop, there will be some **assumptions** regarding the osteopathic evaluation and treatment:
 1. Usual Orthopedic Tests as to motion will have been done. Some may be shown for demonstration, the focus is on OMT.
 2. Imaging and laboratory testing if indicated has been done prior to OMT.
 3. Topics will be Usual cases have been referred to you or have come to you as a DO, with a presumptive diagnoses done- case examples will be provided.
- This workshop plans to give you new and useful concepts with insights in the Diagnosis and Treatment of common extremity problems.
- Part of the holistic “Osteopathic Approach” such as diet, exercise prescription, metabolic problems and behavior modification, etc. will be briefly mentioned
- Most importantly, concepts and Osteopathic treatment ideas to diagnose and treat common upper extremity complaints and problems will be presented with some simple techniques that help reduce pain and restore function.

Part of
the
evaluation
and
treatment



- The “Five Osteopathic Health Care MODELS” need to be considered always.
- The 5 models are the basis for Osteopathic Care.



5 Models of patient assessment and treatment are necessary for upper extremity diagnosis and successful treatment:

According to Still, “Life Essentials” include:

food, air, water, light, heat, exercise, protection and rest- We need these in addition to environmental and psychological harmony.

→ What do these translate to today?

These are the foundations of the osteopathic approach to patient health and these create our models for patient assessment and treatment.



Biomechanical



Behavioral



Metabolic - Energy



Respiratory -
Circulatory




Neurological

“FIVE MODELS OF OSTEOPATHY”

- **Biomechanical**
 - Optimize structure and function of the musculoskeletal system to affect the body’s homeostatic mechanisms
- **Respiratory/Circulatory**
 - Optimize respiratory and circulatory components of homeostatic responses
- **Metabolic/Energetic**
 - Optimizes the body’s biochemical processes, cellular functions, and energy consumption
- **Neurologic**
 - Normalizes nervous system function including somatic and autonomic nerves
- **Behavioral**
 - Utilizes mental, emotional, and spiritual influencers of health

A large red circle on the left side of the slide, containing white text.

History of Chief Complaint is very important

- Consider the onset of symptoms.
 - Ask the patient what he/she thinks caused the problem.
 - What makes it worse?
 - What makes it better?
 - Look at the cervical thoracic and shoulder for referral or restriction.
 - Repetitive use injury or acute?
 - Imaging tests done?
 - Laboratory tests done?
- 
- Four short, thick, purple curved lines arranged in a diagonal pattern in the bottom right corner of the slide.

Pay Attention to the patient when describing Symptoms or Pain

Have them point to problem and motion with the hand



Taking good notes are important but...

- You can miss important clues as to the problem
- Plus gain the confidence of the patient for a better history and trust
- Failure to diagnose by looking at the computer or notes is common.



Myofascial Pain Patterns, Myofascial Trigger Points and Counterstrain Tenderpoints have referred patterns.

- This workshop will give you some extra tools today for diagnosis and treatment.
- Standard orthopedic examinations will not be covered.
- But concepts as to learning pain patterns as part of your examination as well as areas of greatest restriction will be useful.
- Useful and quick OMT for the regions will be covered



Keep in mind that “Pain is often a Liar”...

- May be from Adaptation
- Referred pain from the spine or viscera.



“Pain is Often a Liar”

- The location of pain complaint may be just an Adaptation or Referred pain- but it must be considered before action is taken to treat.
- The pain pattern may be a clue as to origin, and other findings including palpation.



Examples of Myofascial “Liars”:

Besides cervical radicular pain and viscerosomatic pains such as from the heart and lung lung, are often missed referred Myofascial Pain.

History of Chief Complaint, and palpatory findings will help identify the joint pains or paresthesia..

Patients can have **Both** Referred and Local symptoms. Multiple problems are common.

Examples of Myofascial “Liars”:

Besides cervical radicular pain and viscerosomatic pains such as from the heart and lung, are often missed referred Myofascial Pain.

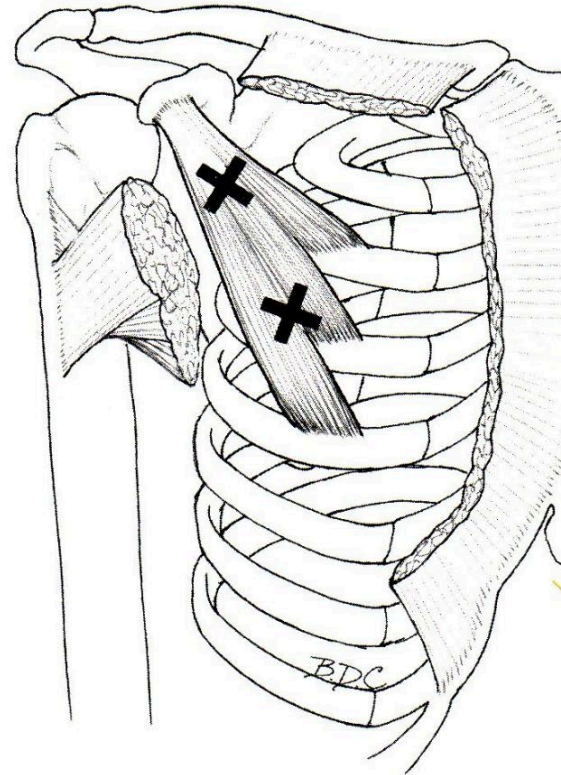
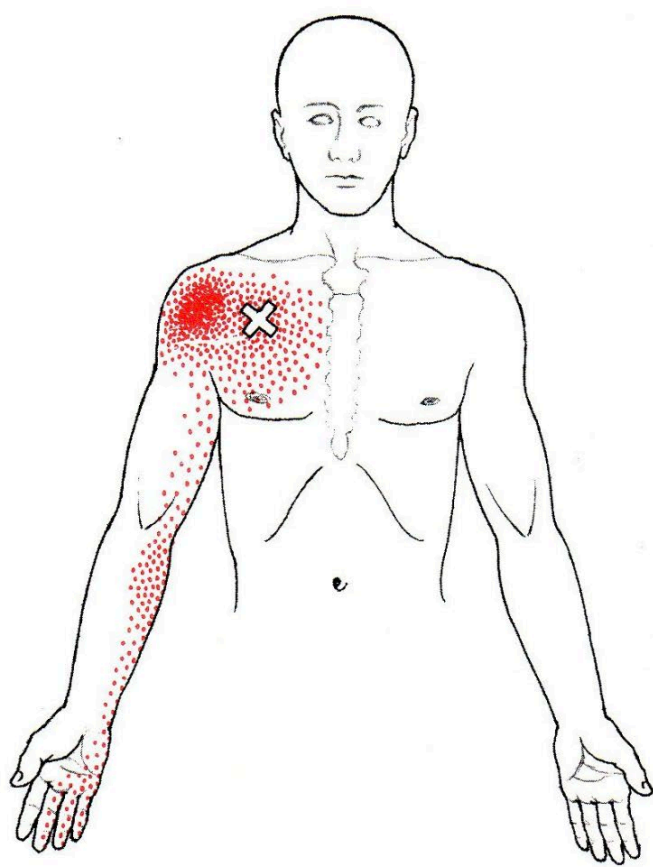
History of Chief Complaint, and palpatory findings will help identify the joint pains, restrictions of motion, weakness or paresthesia..

Patients can have **Both** Referred and Local symptoms.

Problems of the Elbow, Wrist and Hand

- All are often Related by
History of injury, connective
tissue disease and
Compensatory mechanisms





arm on the Tender Point side can be rotated internally, if needed, and pulled medially to further shorten the involved muscle.

Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Pain in the anterior lateral shoulder which can easily be mistaken for a subacromial bursitis.

Associated Pain Referral Pattern: None.

Alternate Names/Nomenclatures: None.

Explanatory Notes: Note the treatment of depressed 1st and 2nd ribs, which varies from above approach, but is the same muscle.

Pectoralis major – clavicular section



PECTORALIS MINOR-ANTERIOR SHOULDER PAIN AND BRACHIAL CHORD MF REFERRALS

MEDIAL CORACOID (Subclavius Muscle)

Location of Tender Point: Just medial to the coracoid process, or in the belly of the subclavius muscle.

Anatomical Correlation(s): Subclavius muscle.

Direction to Press on Tender Point: Press anterior to posterior just medial to the coracoid process. When pressing on the subclavius muscle itself, press anterior to posterior and, holding that pressure, press from inferior to superior against the muscle.

Treatment Position(s): With patient seated, rotate the affected arm internally enough for the dorsum of the wrist to rest on the crest of the ilium at the lateral midline (hammer-lock position). Push the elbow forward to achieve adduction of the shoulder and marked internal rotation to the desired mobile point.

Frequency of Occurrence: Uncommon to rare.

Clinical Correlation(s): Anterior shoulder pain and subclavicular pain in the upper chest.

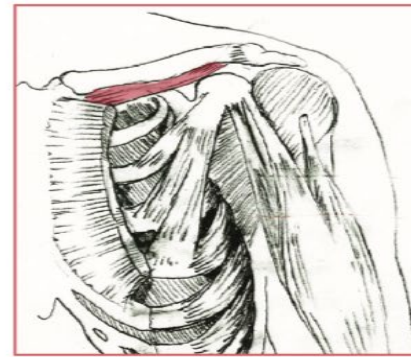
Associated Pain Referral Pattern: Anterior upper arm pain and pain in the lateral forearm and hand. Associated paresthesias may be present in the same areas.

Alternate Names/Nomenclatures: None.

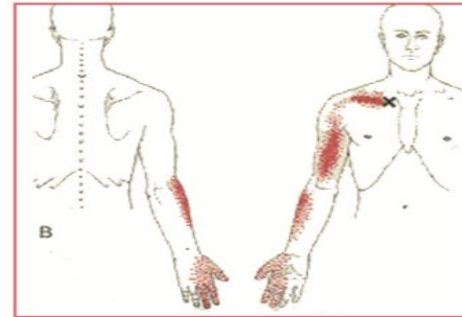
Explanatory Notes: None.

ANTERIOR SHOULDER

A frequent complaint is anterior or anterior-lateral shoulder pain in the upper shoulder and often is misdiagnosed as bursitis. Look first at the following muscles that have a shoulder referral pattern; infraspinatus, supraspinatus, clavicular portion of the pectoralis major, deltoid and biceps brachii are the "usual suspects" that need to be ruled out or in.



Subclavius muscle



Subclavius pain pattern



Treatment position

Subclavius MF Pain

SUBSCAPULARIS

Location of Tender Point: Along the lateral margin of the scapula on the anterior lateral margin of the subscapularis muscle. Delve under the scapula with your finger.

Anatomical Correlation: As stated.

Direction to Press on Tender Point: Press from anterior lateral to posterior medial.

Treatment Position(s): Patient is supine with affected arm and shoulder over the lateral side of the table. Extend shoulder about 30° to bring the level of the muscle insertion parallel to the origin on the anterior surface of the scapula. Rotate the humerus internally with slight adduction. In this instance, it will not be possible to monitor the Tender Point during treatment.

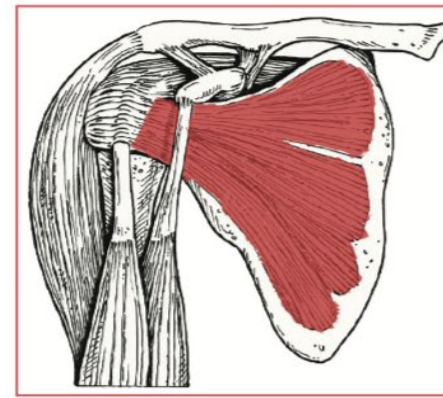
Frequency of Occurrence: Uncommon to rare.

Clinical Correlation(s): Pain in the posterior shoulder area made worse by abduction or flexion of the shoulder.

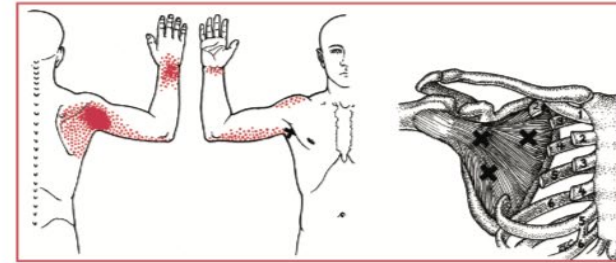
Associated Pain Referral Pattern: Pain in the upper arm and wrist.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.

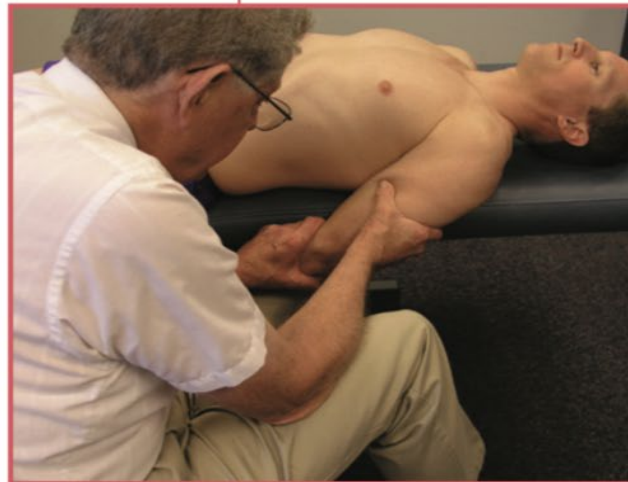


Subscapularis



Subscapularis pain pattern

Subscapularis:
Posterior Elbow and
wrist symptoms



Treatment position

POSTERIOR

SERRATUS POSTERIOR SUPERIOR (Posterior 2nd – 5th Ribs Elevated)

Location of Tender Point: Posteriorly, on the angle of the involved rib on the superior surface where the serratus posterior superior muscle attaches to the rib.

Anatomical Correlation: Serratus posterior superior muscle.

Direction to Press on Tender Point: Press from posterior superior to anterior inferior.

Treatment Position(s): Stand behind seated patient with your foot on the table beside the patient with the axilla on the side of the Tender Point over the your thigh. The patient has one or both feet on the table on the side opposite the Tender Point. This allows sidebending away, which will elevate the angles of the involved ribs and shorten the serratus posterior superior muscle. Suspend patient's arm opposite the side of the Tender Point off the back of the table to enhance rotation.

Extend the cervical and upper thoracic spine to the level of the involved Tender Point to achieve an extension mobile point at this level. Sidebend away. Rotate thorax away to bring the origin of the serratus posterior superior muscle – the bases of C 6-7 and T 1-2 spinous processes – toward the angles of the involved ribs.

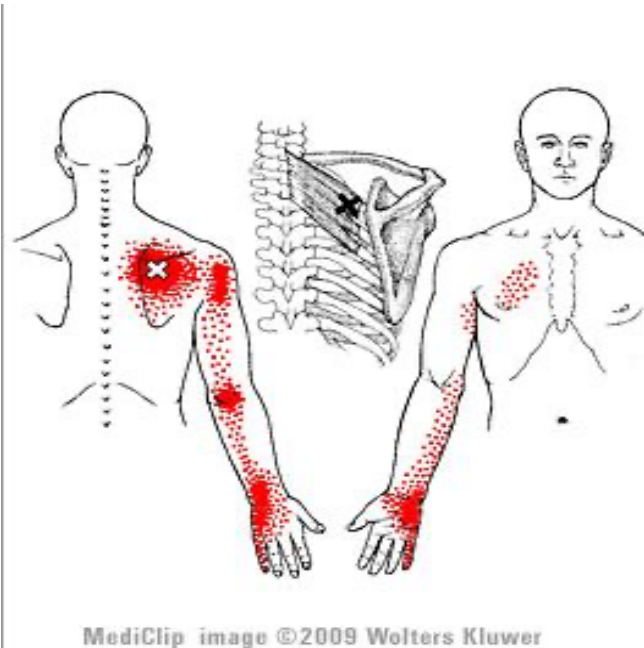
Frequency of Occurrence: Very common.

Clinical Correlation(s): Pain in the upper thorax at the level of the Tender Point actually located under the scapula.

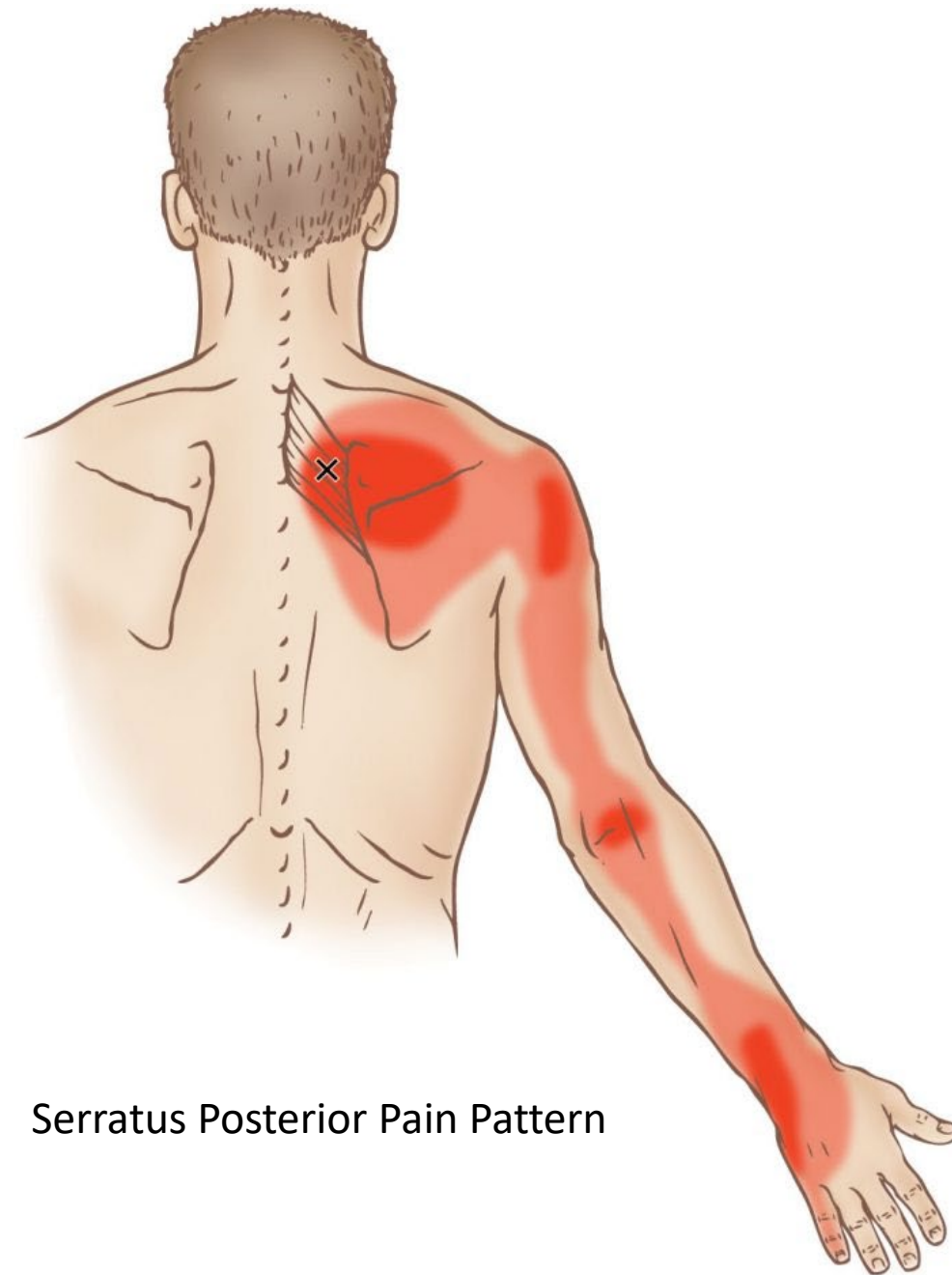
Associated Pain Referral Pattern: Pain and/or paresthesias in the shoulder, arm, and hand.

Alternate Names/Nomenclatures: None.

Explanatory Notes: While this is not a true anatomical shoulder Point, it is included here due to the shoulder-arm pain pattern it causes. It needs to be a primary diagnostic consideration.



MediClip image ©2009 Wolters Kluwer
Serratus posterior superior
pain pattern

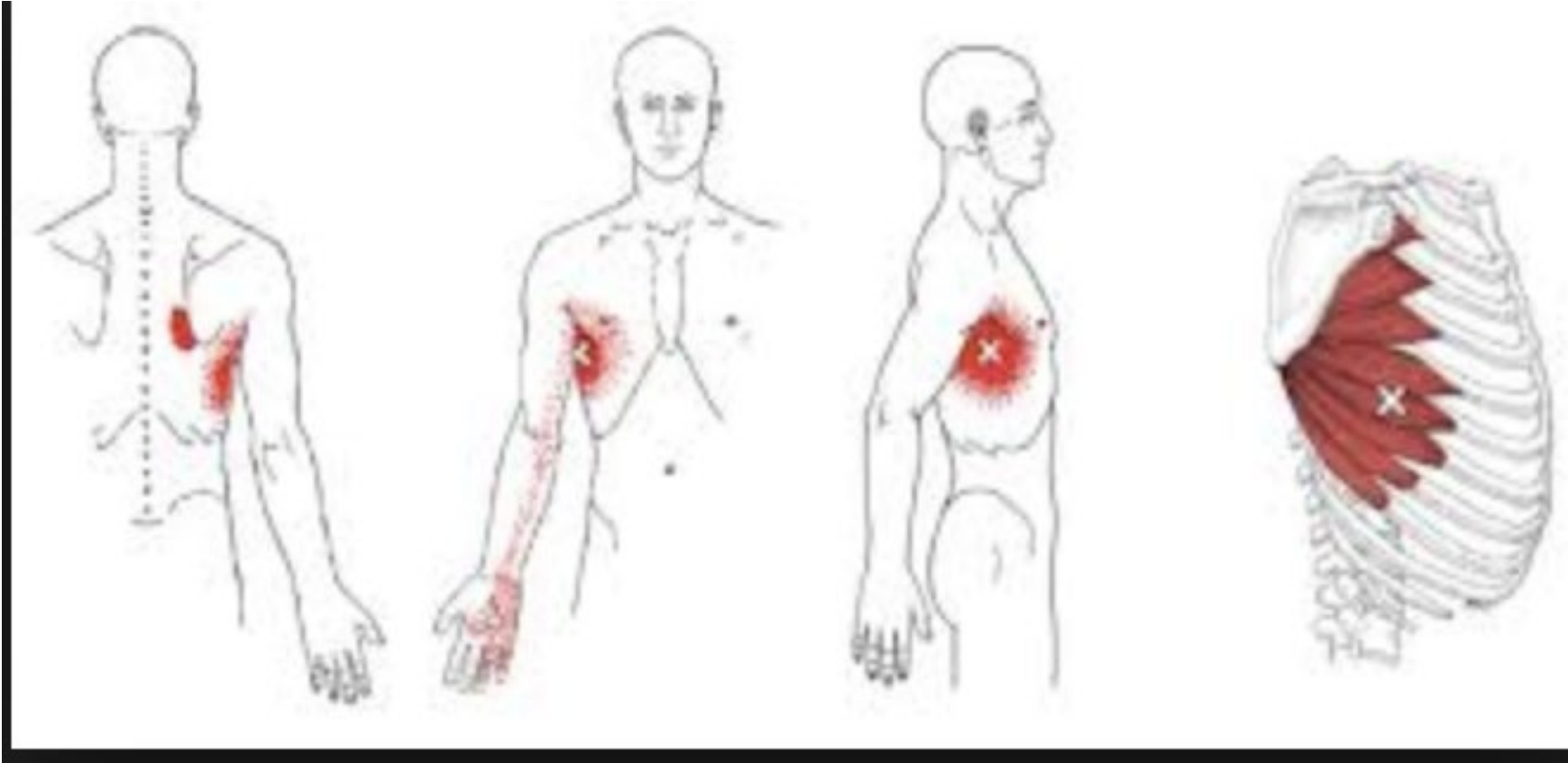


Serratus Posterior Pain Pattern



Treatment position

Serratus Anterior



Serratus Anterior Pain can be referred to the hand and the ribs

A 3 R – A 6 R SERRATUS ANTERIOR DEPRESSED

Location of Tender Point: On the anterior axillary line at corresponding rib levels — on the attachments of the serratus anterior to the ribs.

Anatomical Correlation: Serratus anterior muscle.

Direction to Press on Tender Point: Press from anterior lateral direction to posterior medial.

Treatment Position(s): With patient seated on the table, with one or both feet on the tabletop on the side of the Tender Point to enhance sidebending, stand behind the patient. With your foot on the table, and the patient's axilla on the side opposite the Tender Point on your thigh, flexion of the spine is slight. Sidebend toward, rotate toward.

With the patient's hand on the involved side hanging off the back side of the table, fine-tune with lateral pressure on the medial border of the scapula to further shorten the serratus anterior muscle, by translating the scapula laterally.

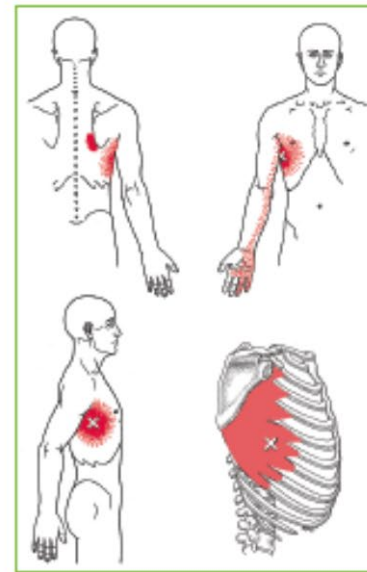
Frequency of Occurrence: Common.

Clinical Correlation(s): Lateral chest wall pain.

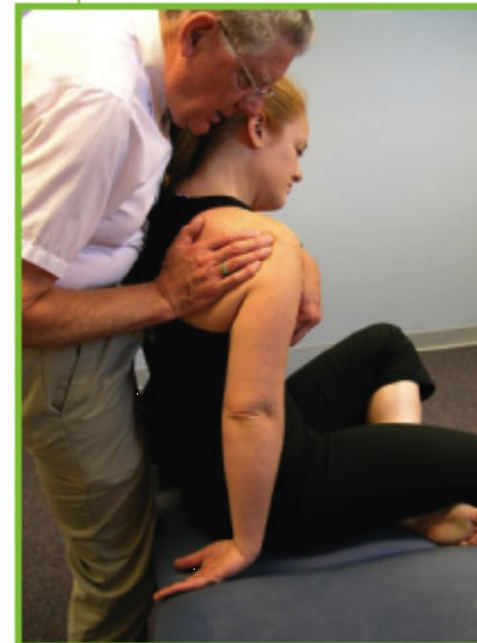
Associated Pain Referral Pattern: Pain and/or paresthesias into the arm and hand.

Alternate Names/Nomenclatures: None.

Explanatory Notes: For depressed ribs 1 and 2 (clavicular portion of pectoralis major) see page 65. *Serratus anterior* is another muscle that can cause chest pain.



Serratus anterior 3 - 6 ribs
pain pattern



Treatment position

Elbow, Wrist and Hand Problems:

All are often
Related by
History of injury,
connective tissue
disease and
Compensatory
mechanisms



Now "Hands ON" OMT Workshop.





Elbow – Forearm OMT

Elbow, Forearm Pains

TRICEPS BRACHII

Location of Tender Point: On the posterior, medial, or lateral aspect of the upper arm, over the various segments of the triceps muscle.

Anatomical Correlation: As stated.

Direction to Press on Tender Point: Press toward the muscle substance depending on which head of the triceps is involved.

Treatment Position(s): Extend the elbow as far as possible within the patient's comfort tolerance. Exert a varus or a valgus force with either internal or external rotation of the extended elbow. If needed, fine-tune the treatment to the involved portion of the muscle. For the long-head, there is also some extension of the shoulder joint which may require supination to fine-tune.

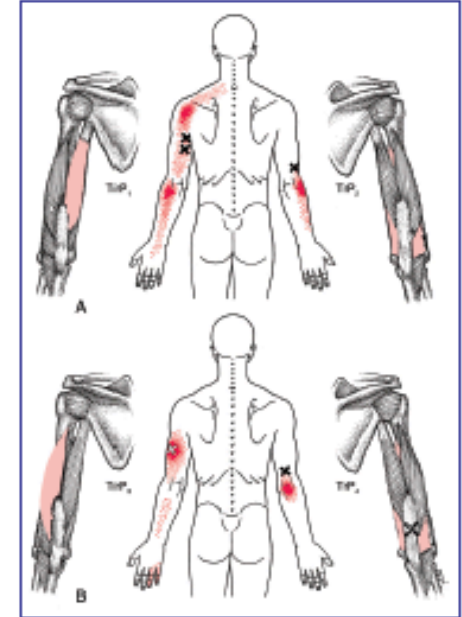
Frequency of Occurrence: Common to uncommon.

Clinical Correlation(s): Pain may be present in posterior shoulder, medial, lateral, or posterior elbow, or arm and hand, depending on which head is involved.

Associated Pain Referral Pattern: As stated in clinical correlation.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Pain patterns of the triceps muscle



Treatment position

EXTENSION ELBOW (Tendon of the Triceps Brachii)

Location of Tender Point: On the medial and lateral aspect of the olecranon process.

Anatomical Correlation: Tendon of the triceps brachii.

Direction to Press on Tender Point: Press laterally against the medial surface of the olecranon process, or medially against the lateral surface.

Treatment Position(s): Hyperextend the elbow and supinate the forearm. A varus or a valgus force is exerted on the olecranon process pushing toward the side of the Tender Point.

Frequency of Occurrence: Rare.

Clinical Correlation(s): Pain in the elbow most noticeable on flexion of the elbow.

Associated Pain Referral Pattern: None known.

Alternate Names/Nomenclatures: Formerly called medial and lateral olecranon by Jones.

Explanatory Notes: None.



Pain pattern



Treatment position

SUPINATOR (Jones' "Radial Head")

LOCATION OF TENDER POINT: On the anterior lateral surface of the of the head of the radius.

ANATOMICAL CORRELATION: The supinator.

DIRECTION TO PRESS ON TENDER POINT: Press from the volar surface of the forearm toward the dorsal surface.

TREATMENT POSITION (): The elbow is comfortably put into full extension. The forearm is put in maximum supination and a mild valgus force is exerted.

FREQUENCY OF OCCURRENCEE: Common.

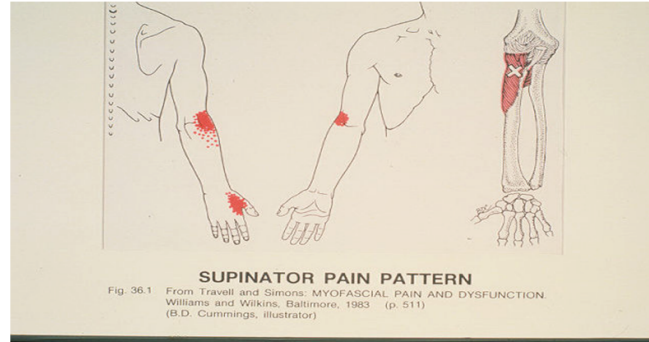
CLINICAL CORRELATION (S): Pain anterior, lateral and posterior over the radial head.

ASSOCIATED PAIN REFERRAL PATTERN: Pain in the hand between the first and second metacarpal bones.

ALTERNATE

NAMES/NOMEMCLATURES: "Tennis elbow"

EXPLANATORY NOTES:



Treatment position



Self treatment position



SUPINATOR (Jones' "Radial Head")

Location of Tender Point: On the anterior lateral surface of the head of the radius.

Anatomical Correlation: The supinator.

Direction to Press on Tender Point: Press from the volar surface of the forearm toward the dorsal surface.

Treatment Position(s): Put elbow into full extension comfortably. Put forearm in maximum supination and exert a mild valgus force.

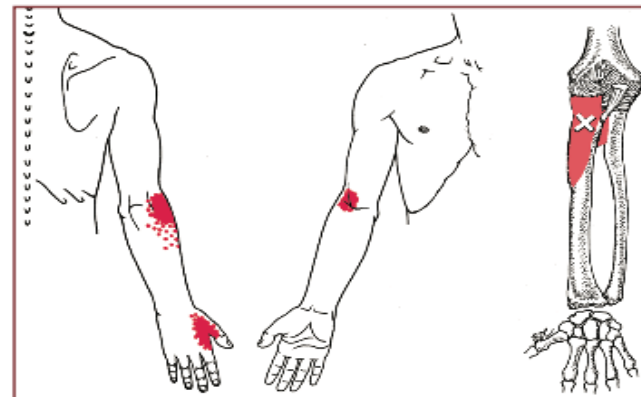
Frequency of Occurrence: Common.

Clinical Correlation(s): Pain anterior, lateral and posterior over the radial head.

Associated Pain Referral Pattern: Pain in the hand between the first and second metacarpal bones.

Alternate Names/Nomenclatures: Tennis elbow.

Explanatory Notes: None.



Supinator pain pattern



Self-treatment position



Treatment position



- Break? 15 Minutes?



Now Wrists and Hands OMT Workshop:



Wrist and Hand OMT
Requires same
Osteopathic
considerations as
above

PRONATOR

Location of Tender Point: Over the medial aspect of the anterior elbow from the epicondyle to the antecubital fossa. An alternate Point is over the radial head and should be considered when the treatment of the pronator is unsuccessful in relieving that Point.

Anatomical Correlation: Pronator teres.

Direction to Press on Tender Point: Press from anterior to posterior.

Treatment Position(s): Flexion and pronation of the elbow is marked. The dorsal surface of the wrist and hand rests against the lateral chest wall with the wrist flexed. This position puts the humerus in internal rotation.

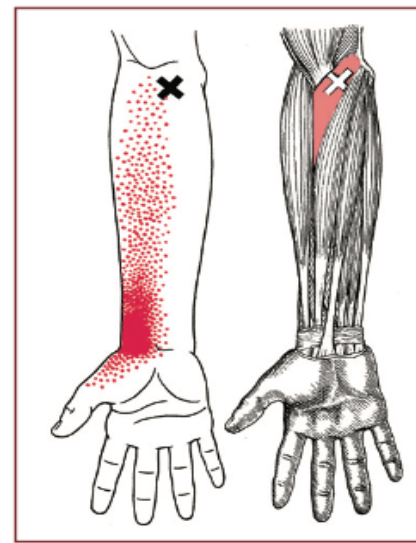
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Pain in the anterior elbow area.

Associated Pain Referral Pattern: Pain down the volar surface of the forearm. May be especially acute in the lower forearm and wrist above the first carpal-metacarpal joint.

Alternate Names/Nomenclatures: None.

Explanatory Notes: Common in carpenters who use a hammer at work.



Pronator teres



Treatment position



Self-treatment position

BRACHIALIS TENDON (Jones' "Flexion Elbow")

Location of Tender Point: On the medial and lateral aspects of the coronoid process in the antecubital fossa.

Anatomical Correlation: Tendon of the brachialis muscle.

Direction to Press on Tender Point: Press into the antecubital fossa toward the posterior elbow.

Treatment Position(s): The elbow is fully flexed and pronated within patient's comfort level. Exert pressure laterally against the forearm to fine-tune. This will result in some external rotation of the humerus.

Frequency of Occurrence: Rare.

Clinical Correlation(s): Anticubital fossa pain. Most noticeable when the elbow is in an extended position.

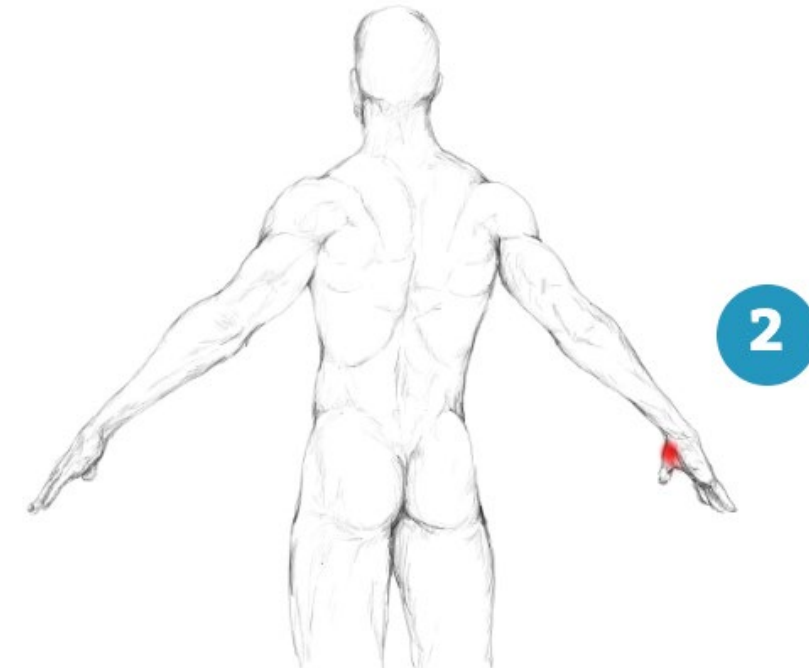
Associated Pain Referral Pattern: Pain at base of 1st metacarpal.

Alternate Names/Nomenclatures: Formerly called medial and lateral coronoid, by Jones.

Explanatory Notes: None.



Brachialis muscle and pain pattern



Treatment position

FLEXORS OF THE HAND AND WRIST

Location of Tender Point: In any of the flexor muscles of the hand and wrist. This Point is often located without actually knowing which specific muscle is involved. Also Tender Points may be found over the palmar wrist area.

Anatomical Correlation: The myriad flexors in the forearm which perform flexion of the hand, wrist, and fingers.

Direction to Press on Tender Point: Press directly into the Tender Point, usually from the volar to the dorsal surface.

Treatment Position(s): Flex the metacarpal-phalangeal joints and/or the wrist to find a flexion mobile point. Flexion of the phalangeal joints may also be needed. Fine-tune with rotation of the forearm.

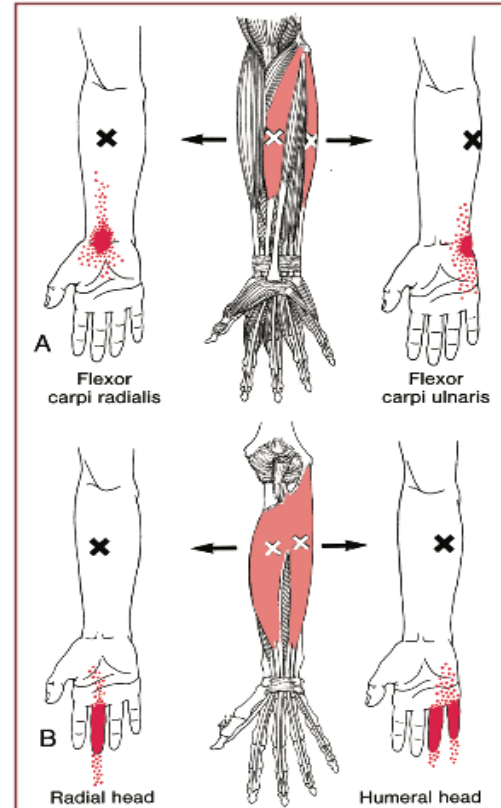
Frequency of Occurrence: Common.

Clinical Correlation(s): This should be checked with any pain pattern on the volar aspect of the hand, wrist, and forearm.

Associated Pain Referral Pattern: Varies with the muscle involved. It is important to do a palpatory scan of the flexor group when these pain patterns are present. The pain can be in the fingers, hand, wrist, and forearm. The diagram at the right gives some examples of the pain distribution.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Examples of flexor pain referral patterns



Treatment position

EXTENSORS OF THE HAND AND WRIST

Location of Tender Point: In any of the extensor muscles of the hand and wrist, from the hand to the lateral epicondyle. Often can be located and successfully treated without knowing the name of the specific muscle involved.

Anatomical Correlation: The whole group of extensors in the forearm, including Jones' dorsal wrist Tender Points.

Direction to Press on Tender Point: Press directly into the Tender Point, usually from a dorsal direction toward the volar surface.

Treatment Position(s): Extend the fingers, including the metatarsal-phalangeal joints and/or the wrist, to find an extension mobile point. Fine-tune with rotation of the forearm.

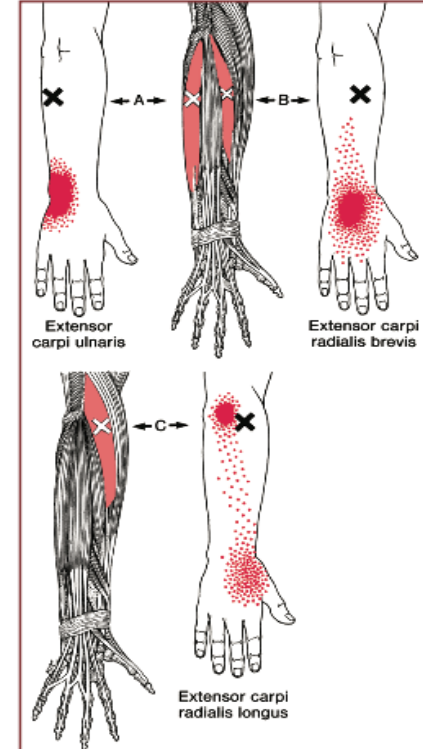
Frequency of Occurrence: Common.

Clinical Correlation(s): This should be checked with any pain pattern on the dorsum of the hand, wrist, and forearm. Pain in the palm of the hand when attempting to grip something also can be due to a myofascial pattern in the extensor muscles of the hand.

Associated Pain Referral Pattern: Varies with the muscle involved. It is important to do a palpatory scan of the extensor group when these pain patterns are present.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Extensor pain patterns



Treatment position

EXTENSORS OF THE HAND AND WRIST

LOCATION OF THE TENDER POINT: In any of the extensor muscles of the hand and wrist from the hand to the lateral epicondyle. The point is often located and successfully treated without knowing the name of the specific muscle involved.

ANATOMICAL CORRELATION: The whole group of extensors in the forearm. This includes Jones dorsal wrist tender points.

DIRECTION TO PRESS ON TENDER POINT:

Press directly into the tender point (usually from a dorsal direction toward the volar surface).

TREATMENT POSITION (): Extend the fingers (including the metatarsal-phalangeal joints) and/or the wrist to find an extension mobile point. Fine tune with rotation of the forearm..

FREQUENCY OF OCCURRENCE: Common.

CLINICAL CORRELATION (S): This should be checked with any pain pattern on the dorsum of the hand, wrist, and forearm. Pain in the palm of the hand when attempting to grip something can also be due to a myofascial pattern in the extensor muscles of the hand.

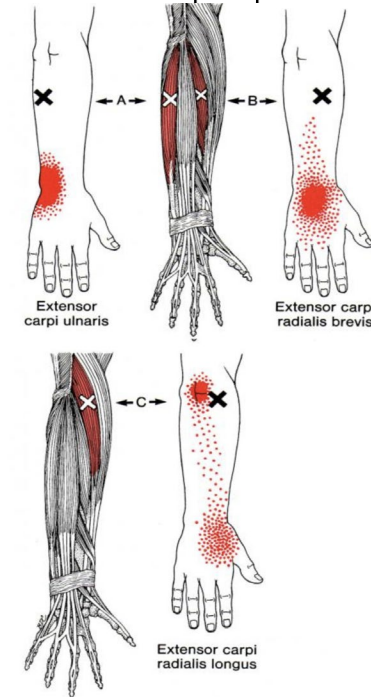
ASSOCIATED PAIN REFERRAL PATTERN:

Varies with the muscle involved; that is why it is important to do a palpatory scan of the extensor group when the above mentioned pain patterns are present.

ALTERNATE NAMES/NOMENCLATURES:

EXPLANATORY NOTES:

Some extensor pain patterns



OPPONENS POLICIS

Location of Tender Point: On the base of the 1st metacarpal at the carpal-metacarpal joint on the palmar surface.

Anatomical Correlation: As stated.

Direction to Press on Tender Point: Press from the palmar surface to the dorsal direction.

Treatment Position(s): Flex the wrist fully and exaggerate the flexion by pressing on the thumb. Fine-tune with wrist rotation.

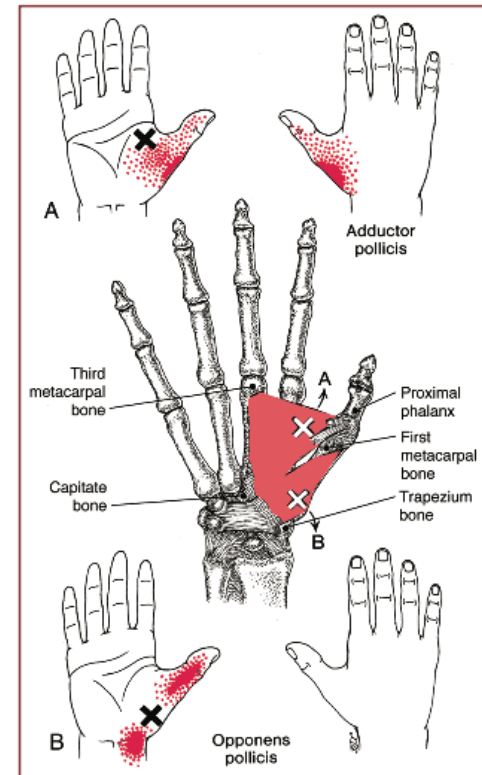
Frequency of Occurrence: Common.

Clinical Correlation(s): Pain over the carpal-metacarpal joint on the palmar side. Weakness is often present in the thumb when gripping.

Associated Pain Referral Pattern: Pain in the thumb itself.

Alternate Names/Nomenclatures: None.

Explanatory Notes: The brachialis muscle and tendon can also refer pain to this area and this possibility needs to be ruled in or out.



Opponens pollicis pain patterns, Figure B.



Treatment position

ADDUCTOR POLLICIS

Location of Tender Point: In the body of the adductor pollicis.

Anatomical Correlation: As stated.

Direction to Press on Tender Point: Press from the palmar to the dorsal surface of the hand through the belly of the muscle.

Treatment Position(s): Internal rotation of the thumb with adduction and flexion of the first carpal-metacarpal joint. This motion can be accomplished by placing the thumb between the second and third fingers and compressing the 1st metacarpal toward the center of the hand.

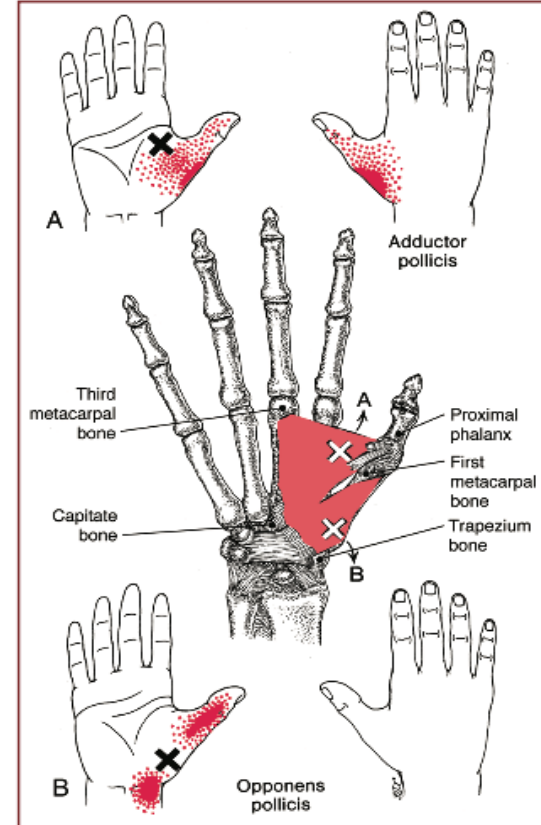
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Pain in the thumb and the thenar eminence.

Associated Pain Referral Pattern: Same.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Adductor pollicis pain patterns, Figure A.



Treatment position

INTEROSSEI

Location of Tender Point: On the palmar surface on the sides of the shafts of the metacarpal bones.

Anatomical Correlation: Interossei palmaris and lumbricals muscles.

Direction to Press on Tender Point: Press from the palmar surface toward the dorsal side, directing the force either medially or laterally against the shaft of the metacarpal bone.

Treatment Position(s): Flex the metacarpal-phalangeal joint and angle (adduct or abduct) the involved finger toward the Tender Point. The distal two joints of the finger are kept in extension.

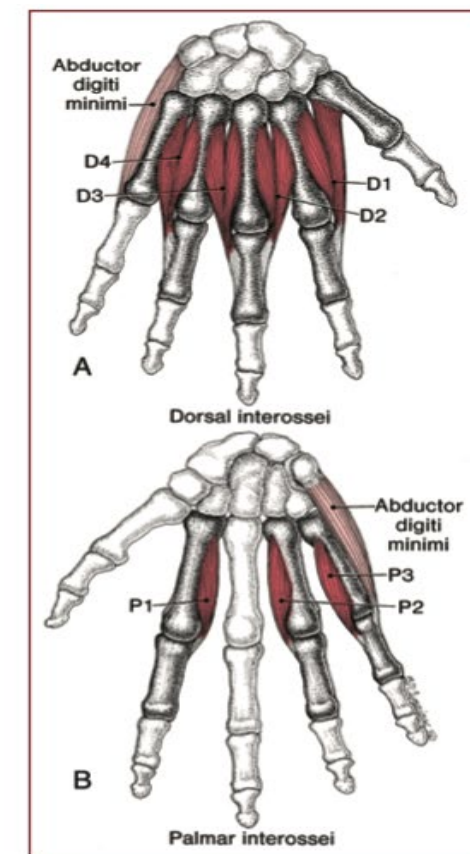
Frequency of Occurrence: Uncommon.

Clinical Correlation(s): Palmar hand pain.

Associated Pain Referral Pattern: May refer pain to the fingers.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



Interossei muscles



Treatment position

DORSAL INTEROSSEI

Location of Tender Point: On the dorsal surface of the shafts of the metacarpal bones over the muscles mentioned below.

Anatomical Correlation: Dorsal interossei muscles.

Direction to Press on Tender Point: Press from the dorsal side of the hand toward the palmar side, directing the force either medially or laterally against the muscle overlying the shaft of the metacarpal bone.

Treatment Position(s): Keeping the finger extended, extend the metacarpal-phalangeal joint, then adduct or abduct the finger toward the Tender Point.

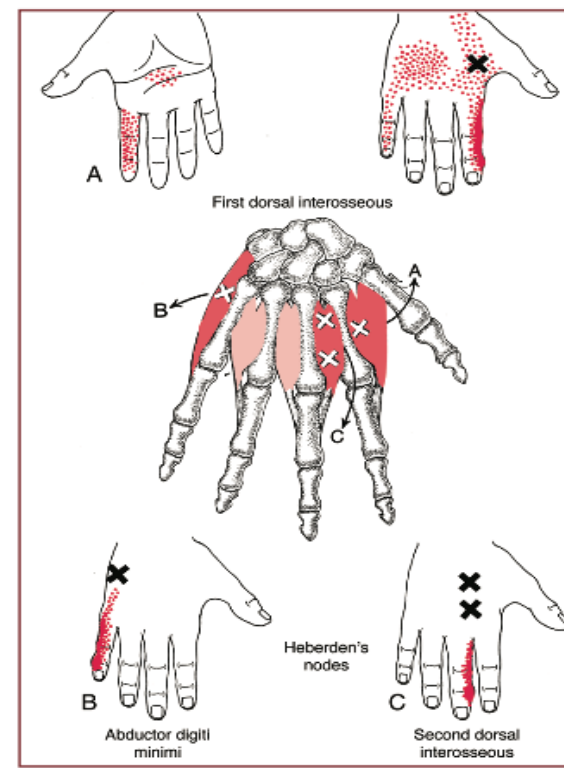
Frequency of Occurrence: Common to uncommon.

Clinical Correlation(s): Pain and weakness in the hand especially when gripping something with the hand.

Associated Pain Referral Pattern: Pain may be referred to one or more of the fingers.

Alternate Names/Nomenclatures: None.

Explanatory Notes: None.



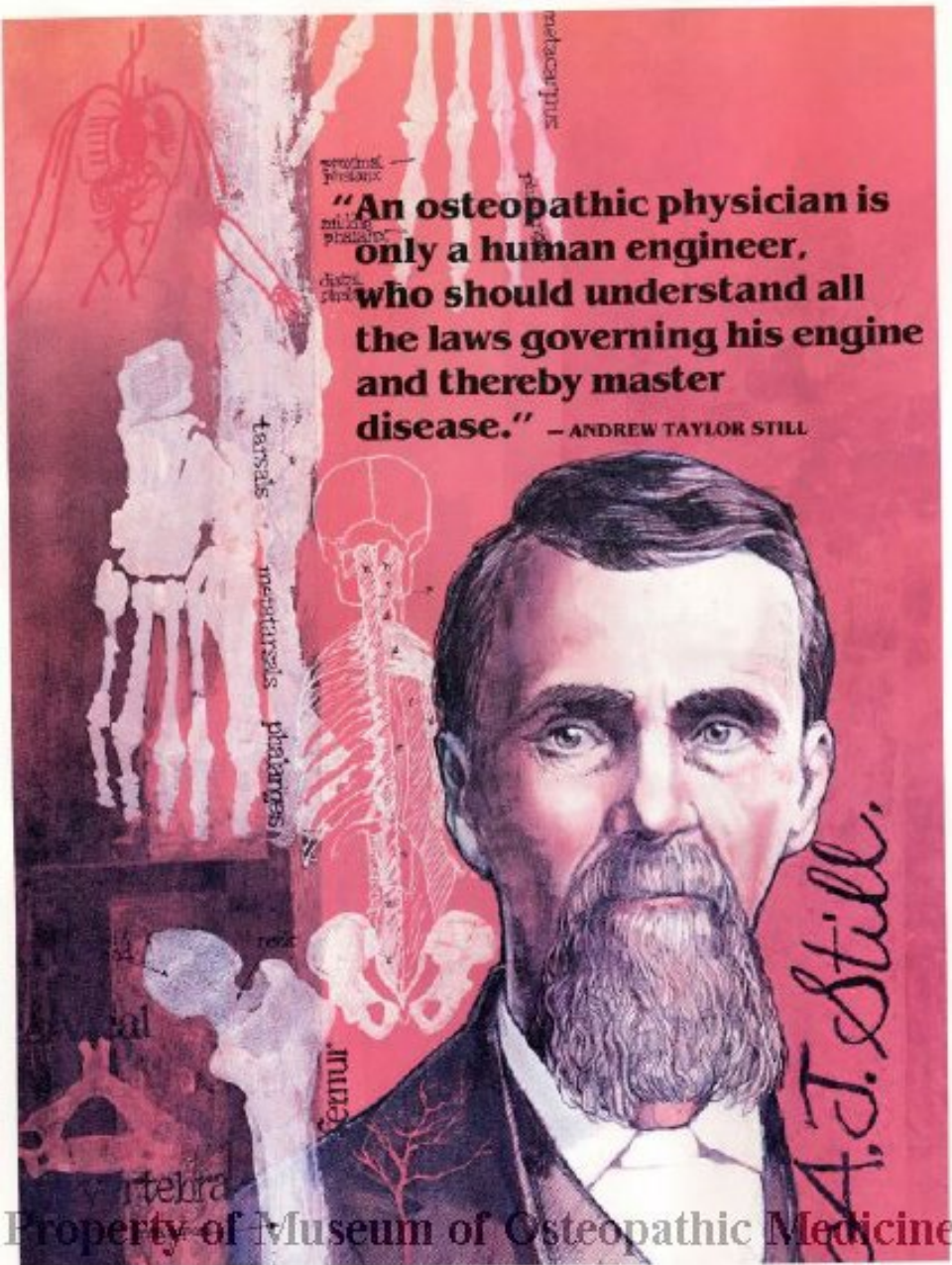
Dorsal interossei



Treatment position



- Break? 15 Minutes?



AT Still, MD, DO Techniques

Andrew Taylor Still, MD, DO Techniques:

- His Osteopathic Treatment of extremities was based on applied anatomy and physiology.
- Knowledge of human anatomy and practice in palpation and technique was needed for his method of OMT.
- The above presented Counterstrain OMT had evolved from Still's method.
- We will do a few as an example.



History of the Still Techniques

- Structure, function, applied anatomy and physiology were the foundation
- Osteopathy not to be defined by a particular method of “adjustment”
- Still would not allow notes of techniques to be published
- Still’s own descriptions in his last book, *Osteopathy: Research and Practice*, are limited

Dr. Richard Van Buskirk's Research

- 1989 Dr. Hazards descriptions found
- Two years later experimentation with techniques began
- Moderate to low velocity best
- Audible click is not necessary for correction
- “ sinking down “ pressure approximately 5lbs. (2 kgm) or less is necessary
- Axial pressure or traction must be maintained throughout mobilization until release is felt
- Direct force over the dysfunctional segment not necessary, only increases patient discomfort



Dr. Van Buskirk's Description

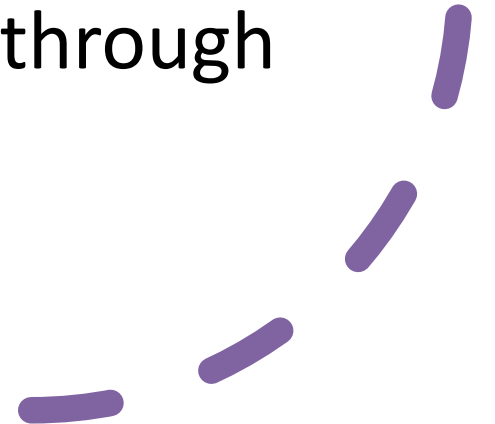
- “ First the affected joint is isolated at its presenting position and its position slightly exaggerated. Second, axial compressive forces are applied through the joint at right angles to the plane(s) of restriction. Finally, a gentle, low velocity motion is introduced in the plane(s) of restriction toward and through the area where the restriction barrier had been.”

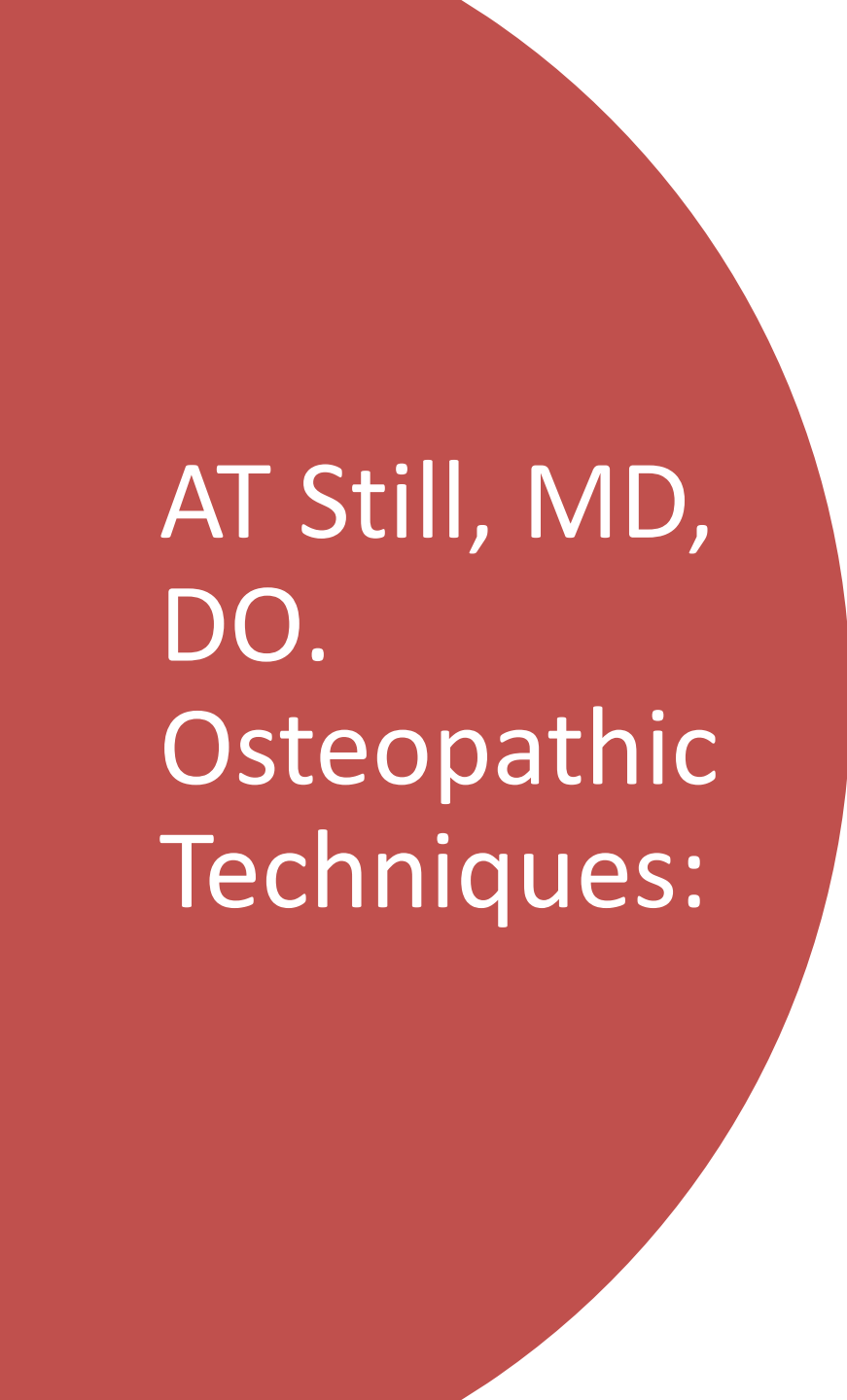
Publications

- First paper presented by Dr. Van Buskirk in JAOA 1996; “A manipulative technique of Andrew Taylor Still”
- Was the first paper to claim the right to name these rediscovered techniques after their initial discoverer, Dr. Still
- “The Still Technique Manual Applications of a Rediscovered Technique of Andrew Taylor Still, M.D.” by Dr. Van Buskirk published by the AAO in 2000
- 2nd Edition Available


Similar to Facilitated Positional Release (FPR) ?

- Similar in appearance only
- Positioning and use of compressive force
- Type I or type II differentiation not necessary for FPR as dysfunctions are treated in neutral
- Position held for brief period, traction or compression applied then segment moved back to neutral, not through the barrier as with AT Still's



A large red circle on the left side of the slide, partially cut off by the edge.

AT Still, MD, DO. Osteopathic Techniques:

- Techniques applicable to virtually every articulation of the body (except cranial)
 - Must start treatment in exaggerated rest position (Also the Counterstrain Position)
 - Must carry the tissue through the region of restriction
 - Must maintain the added compressive or traction force on the tissue throughout the entire articulatory phase
 - Can not be used in “shotgun” fashion, must have specific diagnosis
- 
- Four short, curved purple lines in the bottom right corner of the slide.

Further Refinement

- Axial compression / traction force - essentially a “ Force Vector “
- The force vector does not run parallel to the axis of axial spine, nor the limb being used as a lever
- The force vector runs from the point of compression to and through the dysfunctional tissue
- By visualizing an engaging this force vector in all planes is the key to success and in applying the Still techniques to all areas of the body

Still's Diagnosis

- Spinal segments diagnosed according to Fryette's Principles for Type 1 and Type 2.
- Non-spinal somatic dysfunctions involving the sacrum and the ilium named according to the position in which they are in and/or the direction in which motion is easiest or permitted



Still's Diagnosis for Other Regions

- Spinal segments diagnosed according to Fryette's Principles for Type 1 and Type 2.
- Non-spinal somatic dysfunctions involving the sacrum and the ilium named according to the position in which they are in and/or the direction in which motion is easiest or permitted
- Next year OSD will have a Workshop



Still Technique- An Overview of Five Steps

**Determine which
direction the
dysfunctional joint or
tissue, moves the
easiest (this is
opposite the direction
restriction)**

Step One



Still Technique- An Overview Continued...

- **Move joint and/or tissues in direction of ease of motion until tissue palpably relaxes**
- **Slightly exaggerate position of ease to further relax dysfunctional tissue**

Step Two



Still Technique- An Overview Continued...

- **Introduce about 5 pounds of compression (referred to as FORCE VECTOR) into the dysfunctional tissue or joint with your hand**

Step three

Still Technique- An Overview Continued...

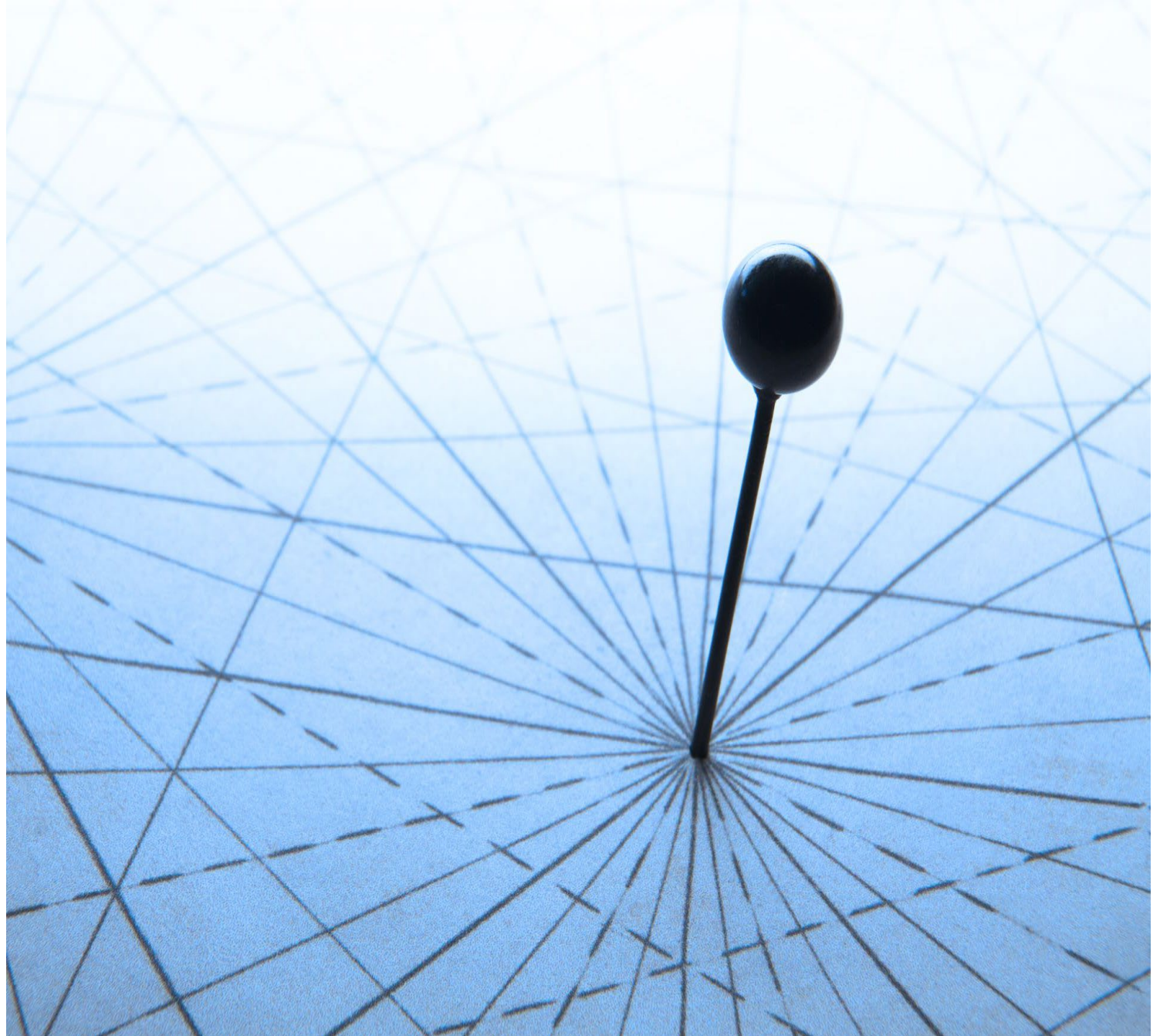
- Using the force vector as a lever and maintaining compression, carry the tissue from direction of ease through the restriction
- There may be a palpable/audible release as upon passing through the restriction



Step Four

Still Technique- An Overview Continued...

- Return the tissue/joint to neutral
- Retest to check if dysfunction has improved
- The procedure can be repeated as many times as necessary
- Sequencing:
- Lumbar spine and pelvic dysfunctions are treated before sacral dysfunction
- And Thoracic Spine before rib and cervical dysfunctions



Step Five

Some other techniques not mentioned...

Gentle articulatory joint manipulation for non inflamed joints. We all use that technique.

Myofascial Release- Indirect MFR for acute and Direct MFR for chronic often after Muscle Energy OMT

Post Isometric Muscle Energy- Gentle patient pushing away from restrictive barrier. Very good for chronic problems but has some limitations.

Isokinetic Muscle Energy for chronic and fibrotic and neurologically restricted joint problems.

All the above techniques could be a Workshop by themselves.
OSD will offer “Still Techniques” next Spring.

Today’s Model of Counterstrain relieves pain and inflammation and restores neurological balance of the joint while is diagnostic and promotes healing.

I hope that the information will be new and useful to you all and I appreciate the opportunity to share these concepts.

Now Additional Choices of OMT for Elbow


Treat Somatic Dysfunctions of neck, thoracic spine, upper ribs and shoulder **First.** “Treat Centrally then peripherally”.

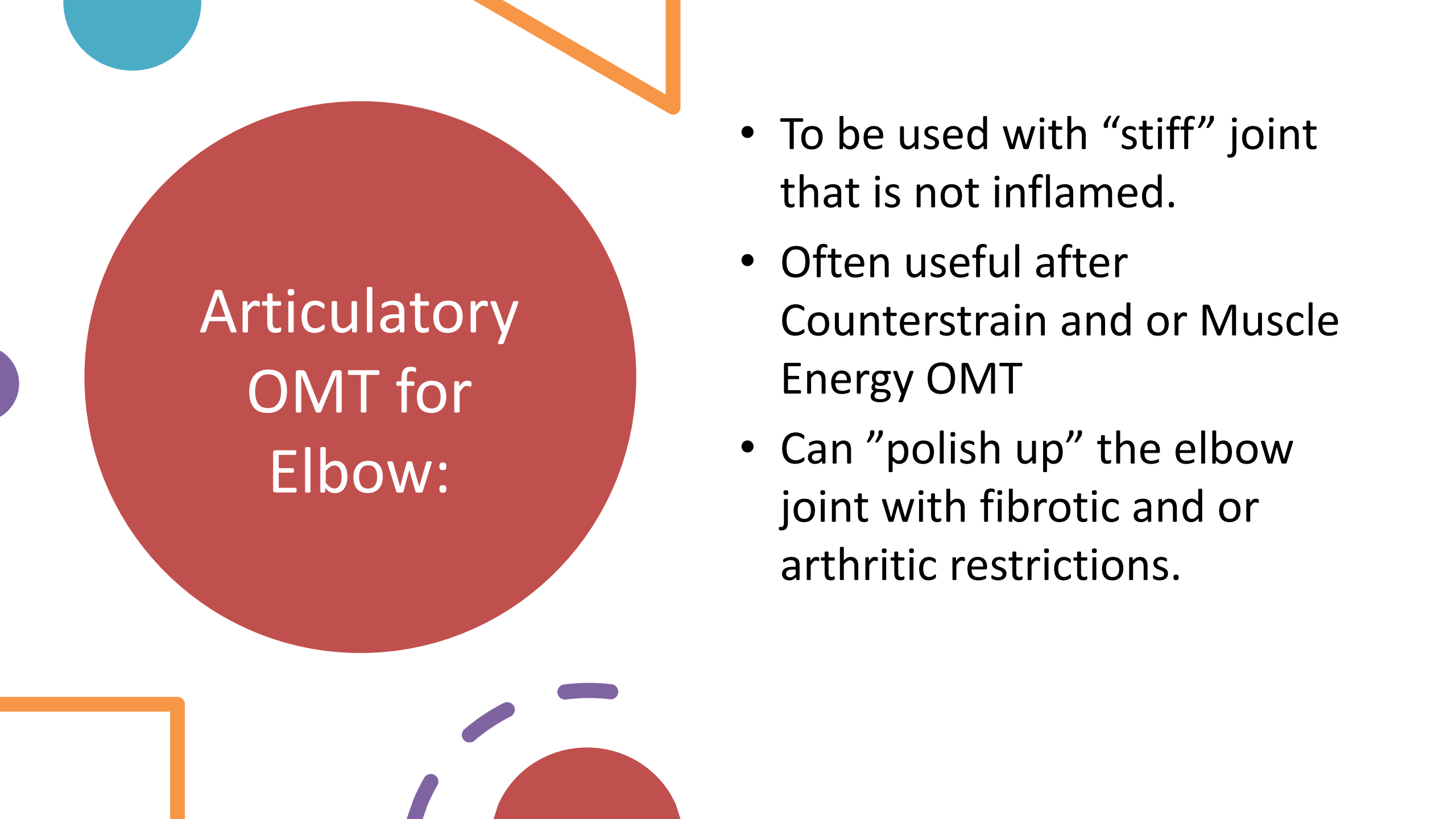
- **Direct and Indirect Myofascial Release OMT-** See the demonstration to follow, then we will do elbow and wrist .
- **Articulatory** OMT of elbow gently move in and out of restricted barrier in extension and flexion. Then pronate and supinate into the barriers. Finally abduct and adduct into the barriers in all positions.
- **Muscle Energy** OMT find the restriction to motion or pain, have the patient gently move away from most restricted motion barrier. If chronic muscle contracture, can try Isolytic muscle energy OMT. Or if muscle is weak from chronic problem use isokinetic OMT.
- **HVLA OMT** has greater risk of injury and use judgement but effective.

Additional Choices for Wrist and Hand OMT

- Use Same sequence as above but check elbow in addition
- Articulatory OMT- Very good for chronic problems
 - Slow Extension-Flexion motion with gentle distraction
 - “Figure 8” articulatory rotation
 - Then grasp thumb and wrist for circular motions

HVLA to the wrist and Hand may be painful and have a short duration of effectiveness. Careful selection of patient and skill is required.





Articulatory OMT for Elbow:

- To be used with “stiff” joint that is not inflamed.
- Often useful after Counterstrain and or Muscle Energy OMT
- Can “polish up” the elbow joint with fibrotic and or arthritic restrictions.

Grasp the
elbow and
wrist



Gently Abduct and Adduct the Elbow

- Put elbow into extended barrier
- Then Adduct and Abduct until it loosens up to easy motion.
- Then try motion in supination
- Then supination





Demonstration of Muscle Energy to Elbow

Patient pushes away from direction it does not want to go....

Simple treatments for extension or flexion or supination or pronation.

Isometric and Isokinetic MET Discusion

Post Isometric Muscle Energy OMT

- Is simple as if the barrier is found in extension or flexion and the patient gently pushes away from the restricted barrier.
- The have have patient pronate or supinate away from barrier
- Restrictions in adduction or abduction also may be present
- Sequence is based on greatest retraction



Isolytic Muscle Energy OMT to Elbow

- Usually with elbows that will not extend actively.
- Patient try to flex elbow against resistance of operator, and operator overcomes the counterforce
- This lyses or breaks chronic fibrotic adhesions at the elbow.
- USE WITH CAUTION and clinical judgement
- It can be painful during and after the adhesions are released.



Isokinetic Muscle Energy for Weak Elbow Flexion

- Use to recruit muscle firing sequence and strength while restoring motion and reducing chronic impairment.
- Patient is challenged to flex against your resistance, but the operator allows flexion while giving counterforce that varies with the patient 's flexion.
- Repeated active flexion against operator's varying resistance



Then gently articulate to Extension barrier

- Move to extension while supinated
- Then pronated
- Flexion Barrier should be improved but may need articulated OMT as well



Articulatory OMT for Wrist

- Grasp the wrist with the thumb on the dorsum at the ulna and the 2nd finger at the ventral wrist at the metacarpals
- Gently distract the wrist joint while actively slowly extending and flexing the wrist joint...



Articulatory Wrist Joint OMT

- Gently flex and extend the wrist while distracting the wrist
- Then while distracting the wrist , circumduct the wrist in a “Figure 8” motion.



Circumduction Motions of Wrist



Now The “AT Still OMT of the Wrist”

- Grasp the radius and ulna at the wrist Firmly
- Then have patient spay or open up the hanks and fingers forcibly



Myofascial Release of Elbow, Wrist and Hand

- Demonstration of several regions:
 - Elbow and interosseous membrane of forearm
 - Wrist “handshake”
 - Wrist retinaculum release for carpal tunnel syndrome.



EXERCISE AND HOME THERAPY

- ****Necessary Adjunct to OMT –is part of Osteopathy**
- Exercise and Supportive Therapy
 - Be specific in your treatment goals
- Stretch, Retrain and Strengthen
 - Simple at home treatments
 - Retraining is key to avoid reinforcing inhibitory reflexes
 - Refer to who will individualize therapy based on kinesiology and muscle –tissue physiology.



Topical or Oral Analgesic Meds Too?

Certainly, very safe topicals can be suggested since they are OTC with the cautions on the package.

- Topical Ibuprofen or Diclofenac are available OTC as directed.
- Oral Ibuprofen in combination with acetaminophen for acute pain and inflammation.
- OMT treats Inflammation WHICH CAUSES PAIN by releasing the “inflammatory soup” from the joints. Small amounts of endorphin is released, cytokines, bradykinins , etc.



In Summary:

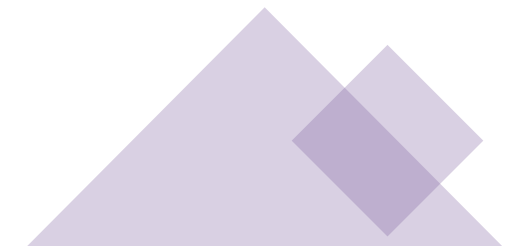


Use your palpatory and physical examination skills that are helpful for diagnosis and osteopathic treatment of joint problems. They are important to imaging and other studies.

Many clues as to diagnosis and the selection of treatment come from a careful History and Osteopathic evaluation including the above concepts.

The application of the 5 Models of Osteopathy can give success in treatment which includes supportive care Plan.

Identifying Causation helps to design a good treatment plan. Is the problem from repetitive use, osteoarthritis or capsulitis from old injury, connective tissue disorder, referred pain or paresthesia from another source, acute/chronic injury, exacerbation of one or all the above?



- Any Questions?



Thank you!

Suggested Readings:



- *Foundations of Osteopathic Medicine*, 4th Ed. Seffinger, Chapter 37 on Strain Counterstrain by John C. Glover DO, FAAO and Paul R. Rennie, DO, FAAO, Chapter 28G, Upper Extremity pp.684-673,
- *Clinical Applications of Counterstrain, Compendium Edition*. Myers, H.; Devine, W.; TOMF Publishing, 2012. Introduction, Physiology, Principles of Treatment and Definitions of OMT, Clinical Diagnosis and Treatment of Upper Extremities,
- Travell JG, Simons DG. *Myofascial Pain and Dysfunction: The Trigger Point Manual. The Lower Extremities*. Vol. I. Baltimore, MD, Williams & Wilkins; 1983.

Suggested References

