STRAIN-COUNTERSTRAIN

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Strain-Counterstrain

- Developed by Lawrence Jones, D.O.

- Based on work of Irvin Korr, Ph.D. "Proprioceptors and Somatic Dysfunction"

Korr said:

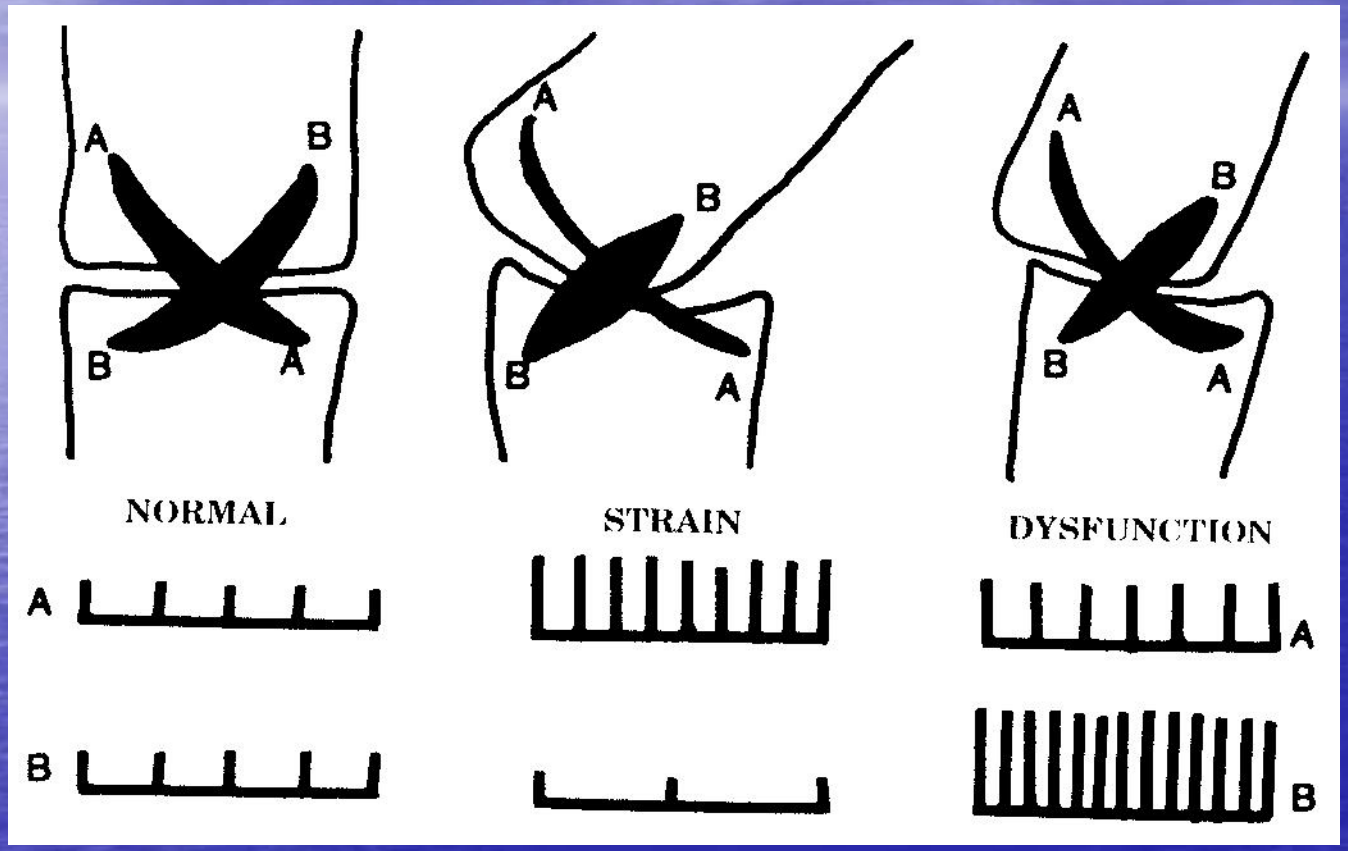
- “To a physiologist it seems much more reasonable that the limitation and resistance to motion of a joint that characterizes an osteopathic lesion do not arise within the joint, but are imposed by one or more of the muscles that traverse and move the joint.”

Korr, cont

- Increased gamma outflow in response to momentarily silent proprioceptor input from hypershortened muscle

Korr, cont'd

- Inappropriate "gain" in the primary proprioceptor reflexes in the muscle spindle
- When muscle is returned to resting length, "restretched", this increased gain causes an overreaction and spindle reports strain before any real strain


A
B
B
A
NORMAL
A
B
B
A
STRAIN
A
B
B
A
DYSFUNCTION
A
B
A
B

Dysfunctional State

- Proprioceptor input to spindle is altered and gamma bias too high
- Somatic reflex
- SCS corrects the aberrant proprioceptor input, resets gamma bias and interrupts the reflex

Definition 1

- A passive positional procedure that places the body in a position of greatest comfort, thereby relieving pain by reduction and arrest of inappropriate proprioceptor activity that maintains somatic dysfunction.

Definition 2

- A mild overstretching applied in a direction opposite to the false and continuing message of strain which the body is suffering

TENDER POINTS

- Over 200 distinct tender points
- Manifestations of somatic dysfunction

What is a tender point?

- Small zone of tense, tender edematous muscle and fascial tissue
- 1 cm in diameter

What is a tender point?

- Sensory manifestation of a neuromuscular or musculoskeletal dysfunction
- At least 4x as tender to palpation than normal tissue

What is a tender point?

- They are NOT trigger points
- Travell latent trigger point- does not respond to spray and stretch or injection

TECHNIQUE

- Locate tender point
- Find position of comfort, or mobile point, at least 70% decrease in tenderness
- Monitor tender point as hold position of comfort 90 seconds

TECHNIQUE

- Return to neutral slowly
- Recheck tender point- at least 70% decrease in tenderness

Mobile Point

- Point of maximum tissue relaxation beneath your monitoring finger
- If you move in any direction, it will increase tissue tension

Treatment Pulse

- If you have found the mobile point, as you hold the 90 seconds, you'll feel a pulsing
- Probably blood flow returning to area

GENERAL RULES

- Hold treatment position for 90 seconds
- Return to neutral slowly
- Anterior tender points are usually treated in flexion

GENERAL RULES

- Posterior tender points are usually treated in extension
- Tender points on or near midline are treated with more flexion and extension

GENERAL RULES

- Tender points lateral to midline are usually treated with more rotation and sidebending
- With multiple points, treat the most severe first

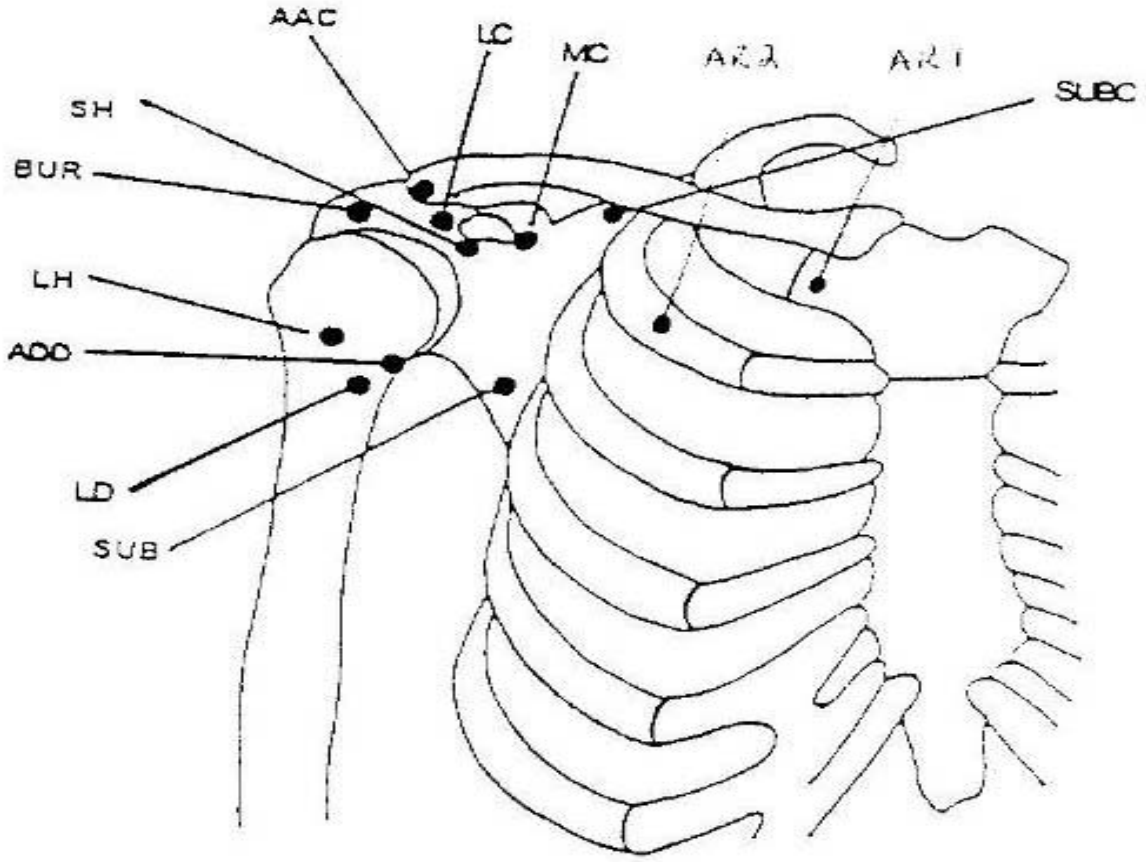
GENERAL RULES

- It tender points are in a row, treat the one in the middle first
- Tender points in the extremities are usually on the opposite side of pain

GENERAL RULES

- Warn patient they may be sore after the treatment
- Only contraindication is (+) vertebral artery test for some cervical treatments

ANTERIOR SHOULDER TENDER POINTS



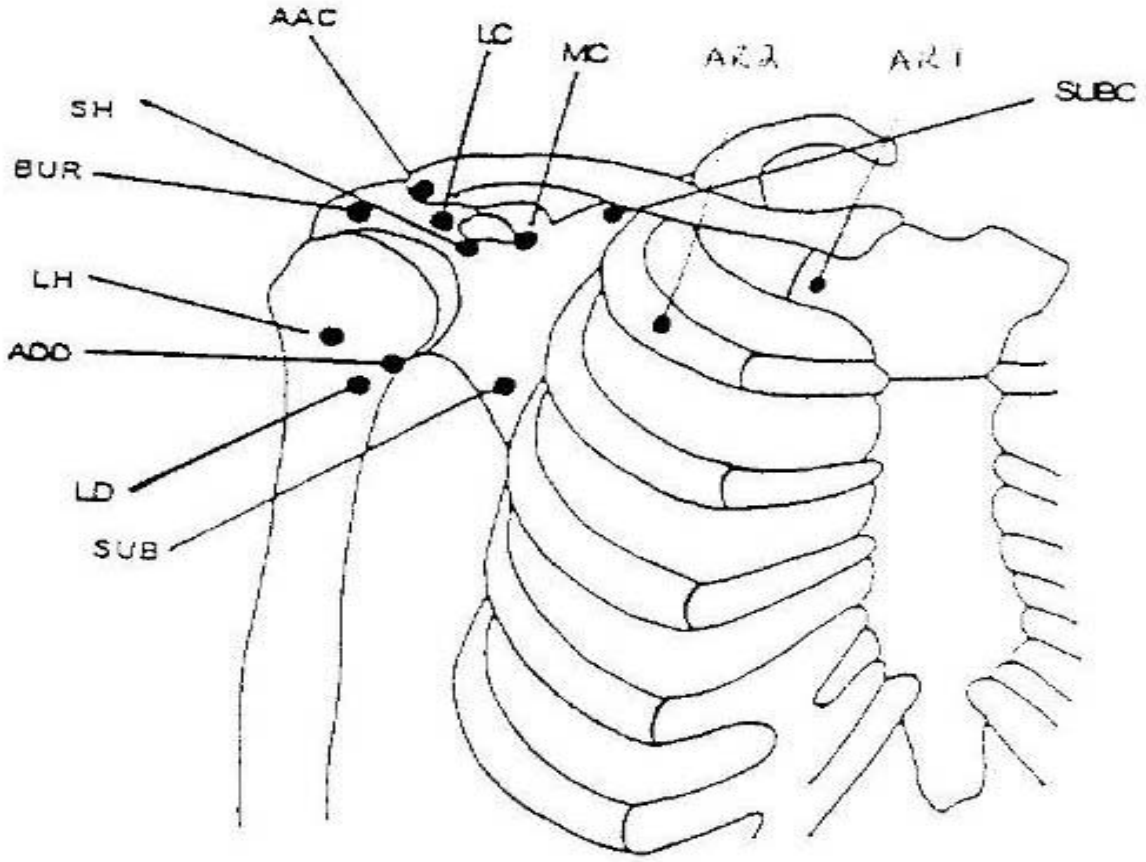
Anterior rib 1 (AR1)

- Tender Point: 1st costal cartilage
- Treatment: Patient supine
  - Mild cervical flexion
  - Marked rotation toward tender point
  - Mild cervical sidebend toward

Anterior Rib 2 (AR2)

- Tender Point: 2nd rib mid clavicular line
- Treatment: same as AR1

ANTERIOR SHOULDER TENDER POINTS



Anterior Acromio-clavicular (AAC)

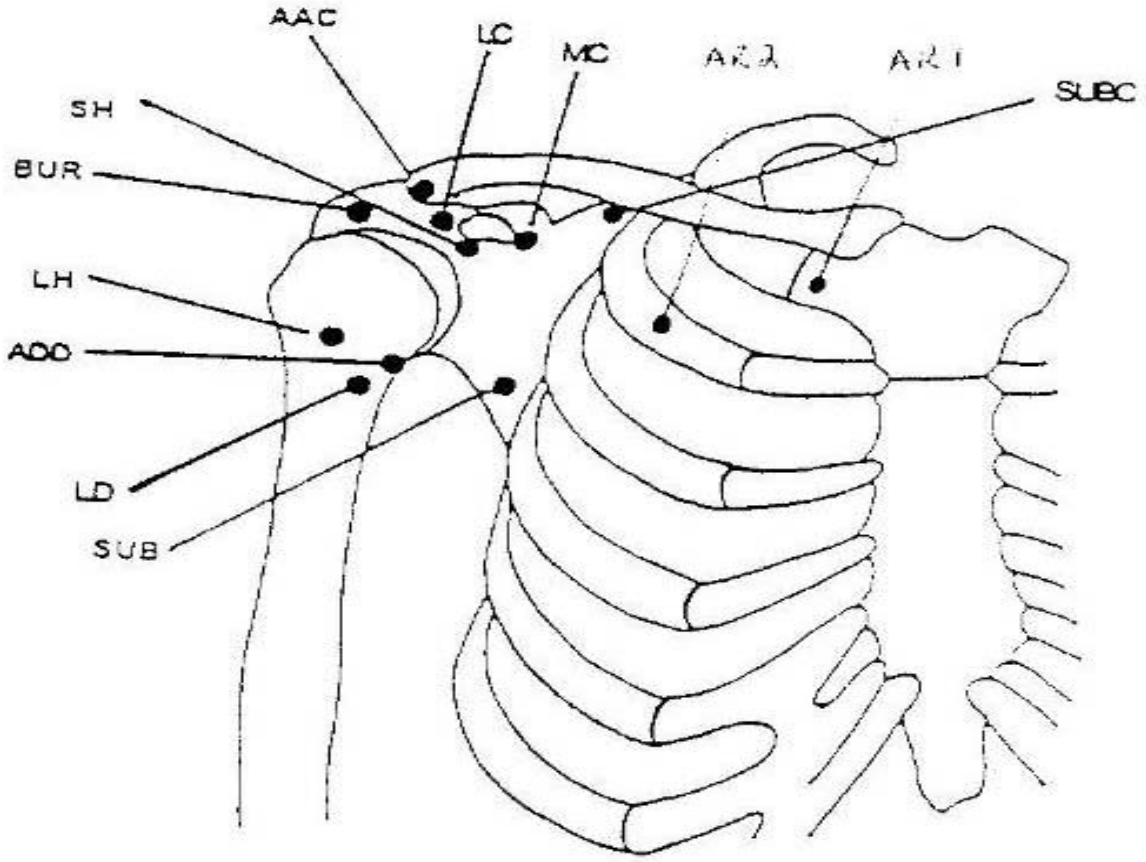
- Tender Point: Anterior aspect distal clavicle
- Treatment: Patient supine
  - Clinician stands on opposite
  - Adduct obliquely across body, 0-30°
  - Slight traction of arm

Bursa (BUR)

- Tender point: Under acromion with arm in 90° abduction

- Treatment: Patient supine
  - Flexion of arm 120°
  - Slight ER of arm with elbow flexed

ANTERIOR SHOULDER TENDER POINTS



Long Head of Biceps (LH)

- Tender point: Over long head in bicipital groove
- Treatment: Patient supine
  - Flexion of arm, dorsum of hand on forehead
  - Fine tune with IR or ER of arm

Short Head of Biceps (SH)

- Tender Point: Inferior lateral aspect of coracoid

- Treatment: Patient supine
  - Flexion of arm 90°, elbow flexed, forearm supinated
  - Moderate horizontal adduction

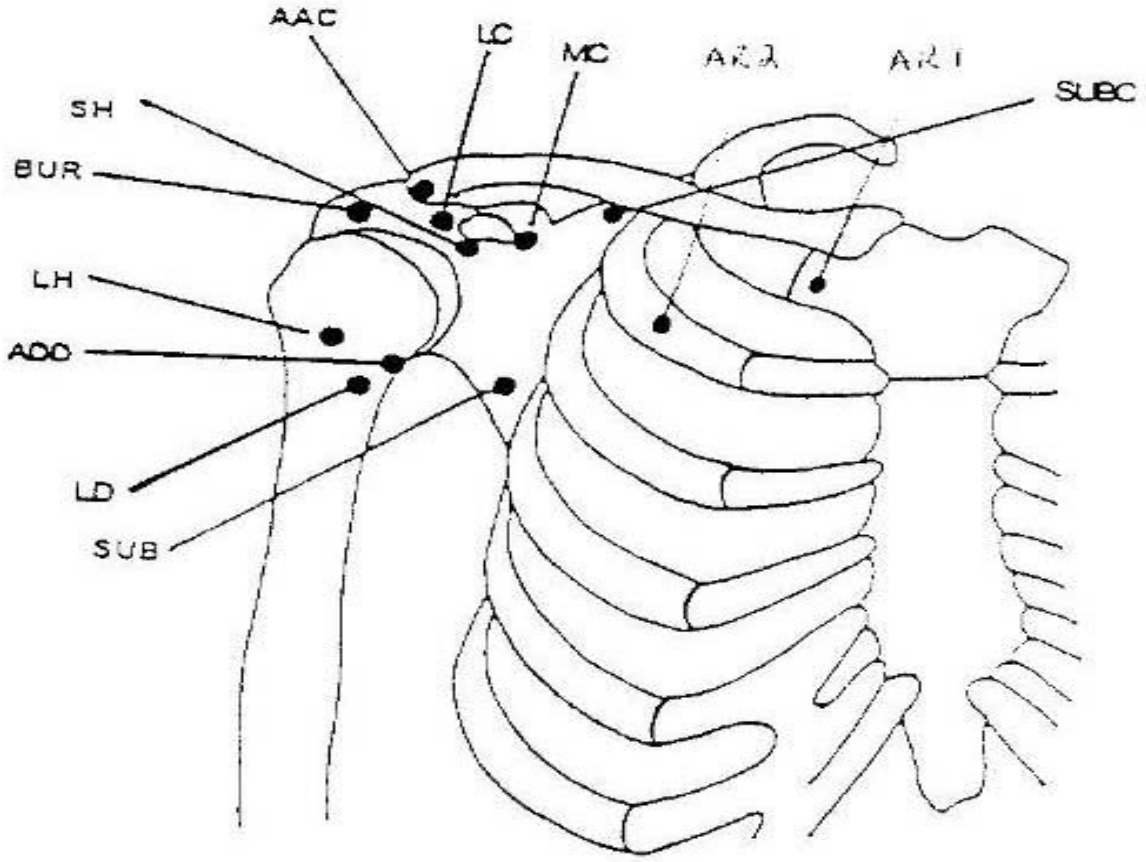
Medial Coracoid (MC)

- Tender Point: Medial aspect of coracoid process
- Treatment: Patient sitting
  - Extend arm 30°
  - Slight adduction
  - IR
  - Slight shoulder protraction and push elbow forward

Lateral Coracoid (LC)

- Tender Point: Superior aspect of coracoid
- Treatment: Patient supine, head off table
  - Marked cervical extension
  - SB away
  - Rotate toward

ANTERIOR SHOULDER TENDER POINTS



Subscapularis (SUB)

- Tender Point: Lateral margin of scapula, anywhere in subscapularis

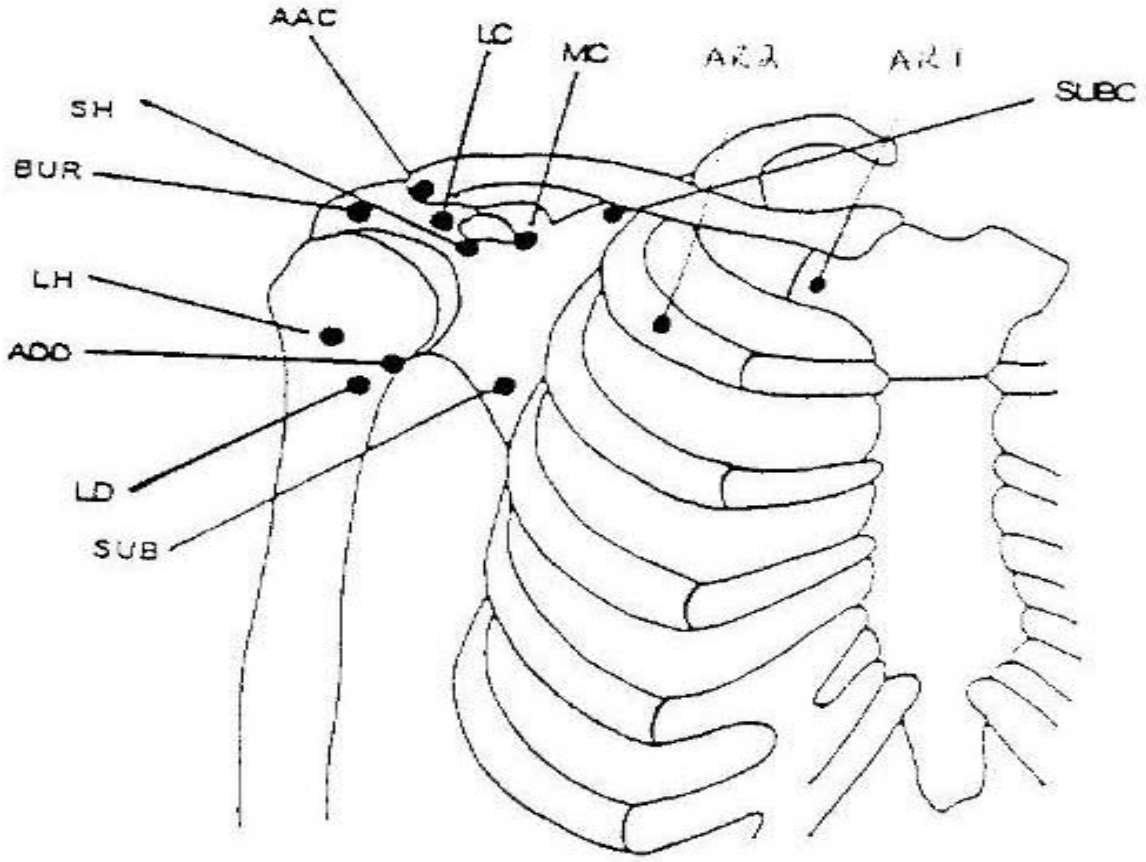
- Treatment: Patient supine, edge of table
  - Extend arm 30°
  - Marked IR
  - Slight adduction

Latissimus Dorsi (LD)

- Tender Point: Anterior humerus, elow bicipital groove

- Treatment: Patient supine, edge of table
  - Extend arm 30°
  - Marked IR
  - Traction of arm

ANTERIOR SHOULDER TENDER POINTS



Adduction Shoulder (ADD)

- Tender Point: High in axilla on medial humerus

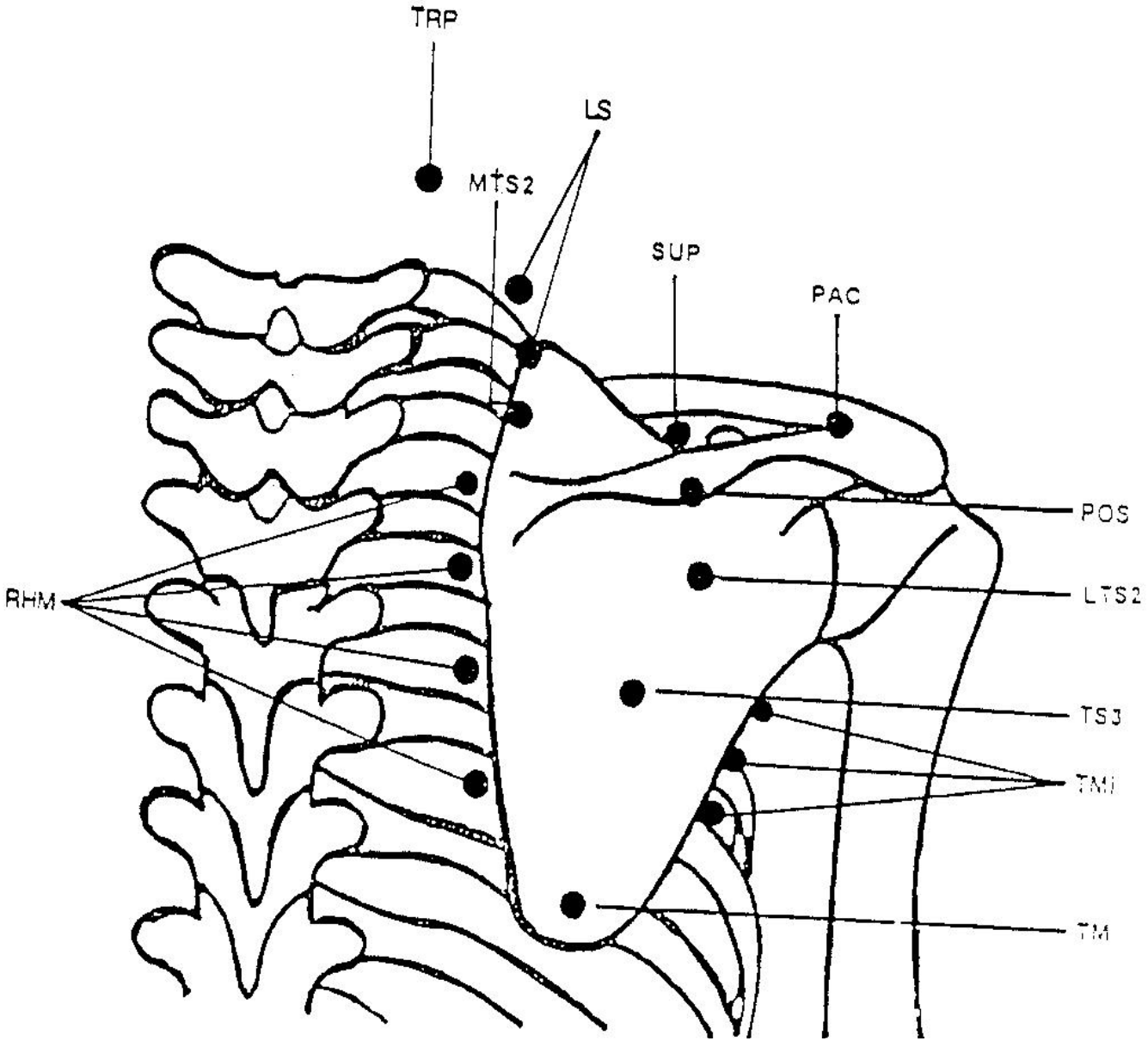
- Treatment: Patient supine
  - Adduction of arm tight to body
  - Compression through shaft of humerus

Subclavius (SUBC)

- Tender Point: Under surface of mid-clavicle

- Treatment: Patient supine
  - Clinician on opposite side
  - Adduction of arm horizontally

POSTERIOR SHOULDER TENDER POINTS



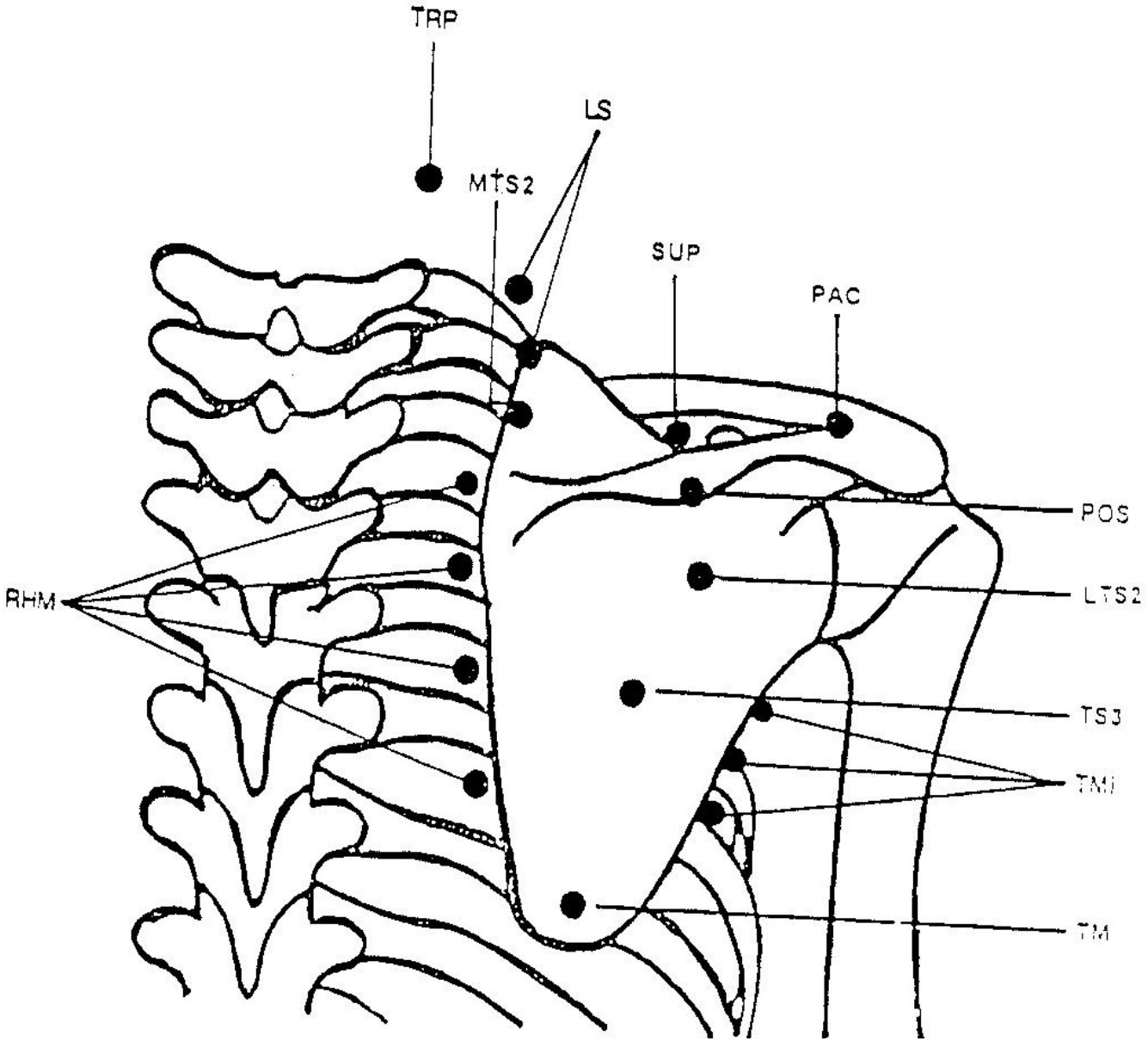
Posterior Acromio-clavicular (PAC)

- Tender Point: Posterior clavicle
- Treatment: Patient prone
  - Adduct arm obliquely across body 0-30°
  - Traction of arm

Supraspinatus (SUP)

- Tender Point: Belly of muscle
- Treatment: Patient supine
  - Flexion of arm 45°
  - Abduction of arm 45°
  - Marked ER

POSTERIOR SHOULDER TENDER POINTS



Medial Second Thoracic Shoulder (MTS2)

- Tender Point: Superior vertebral angle of scapula

- Treatment: Patient supine
  - Flexion of arm 110-120° with elbow flexion
  - Fine tune with rotation

Lateral Thoracic Shoulder (LTS2) Infraspinatus

- Tender Point: Infraspinatus fossa ~2 cm below spine

- Treatment: Patient supine
  - Flexion of arm 90-110°
  - Moderate horizontal abduction
  - Maybe ER

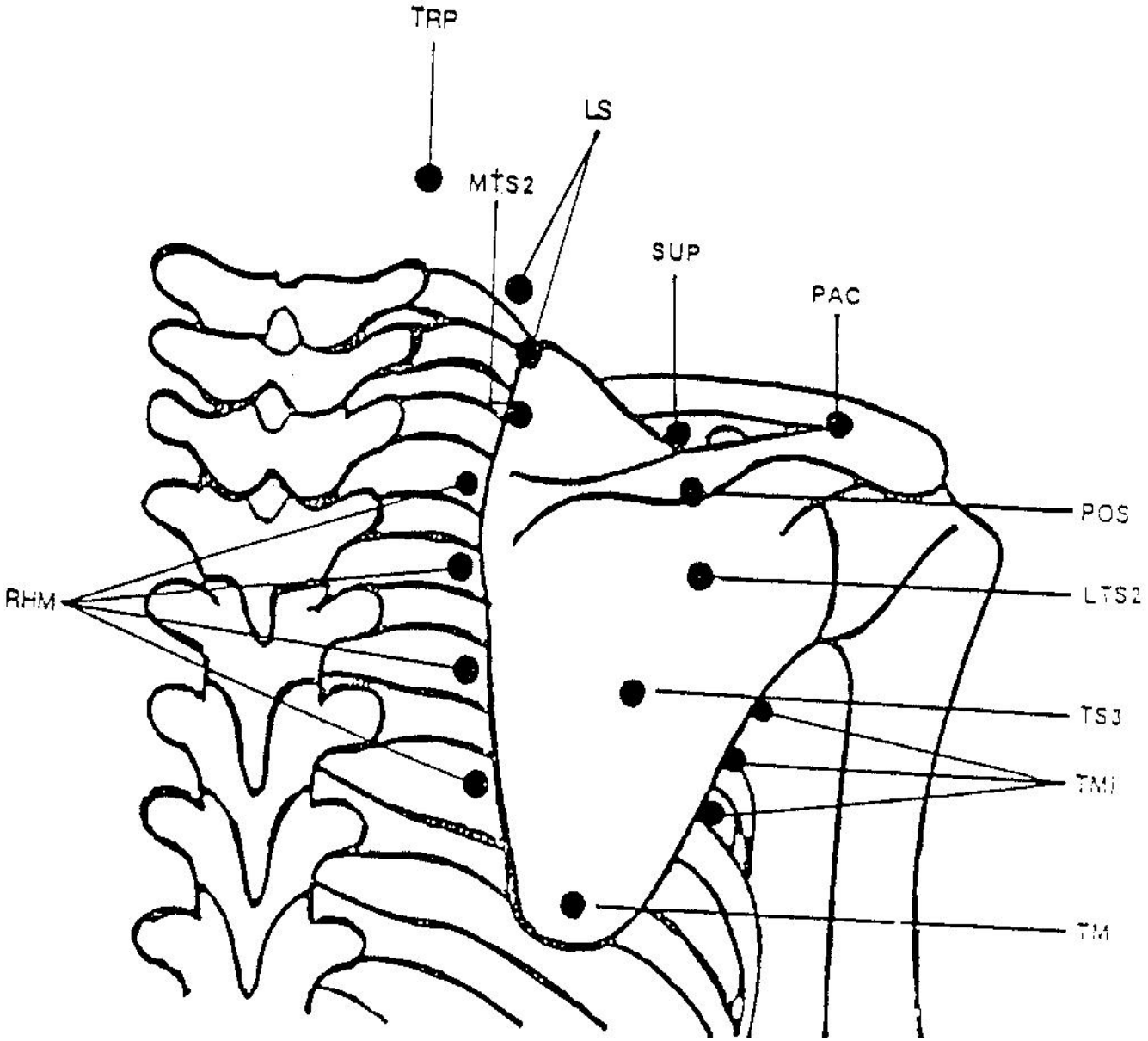
Point of Spine (POS)

- Tender Point: On spine of scapula
- Treatment: Same as LTS2

Third Thoracic Shoulder (TS3)

- Tender Point: Belly of infraspinatus
- Treatment: Patient Supine
  - Flexion of arm 135°
  - Fine tune with ad/abduction and rotation

POSTERIOR SHOULDER TENDER POINTS



Trapezius (TRP)

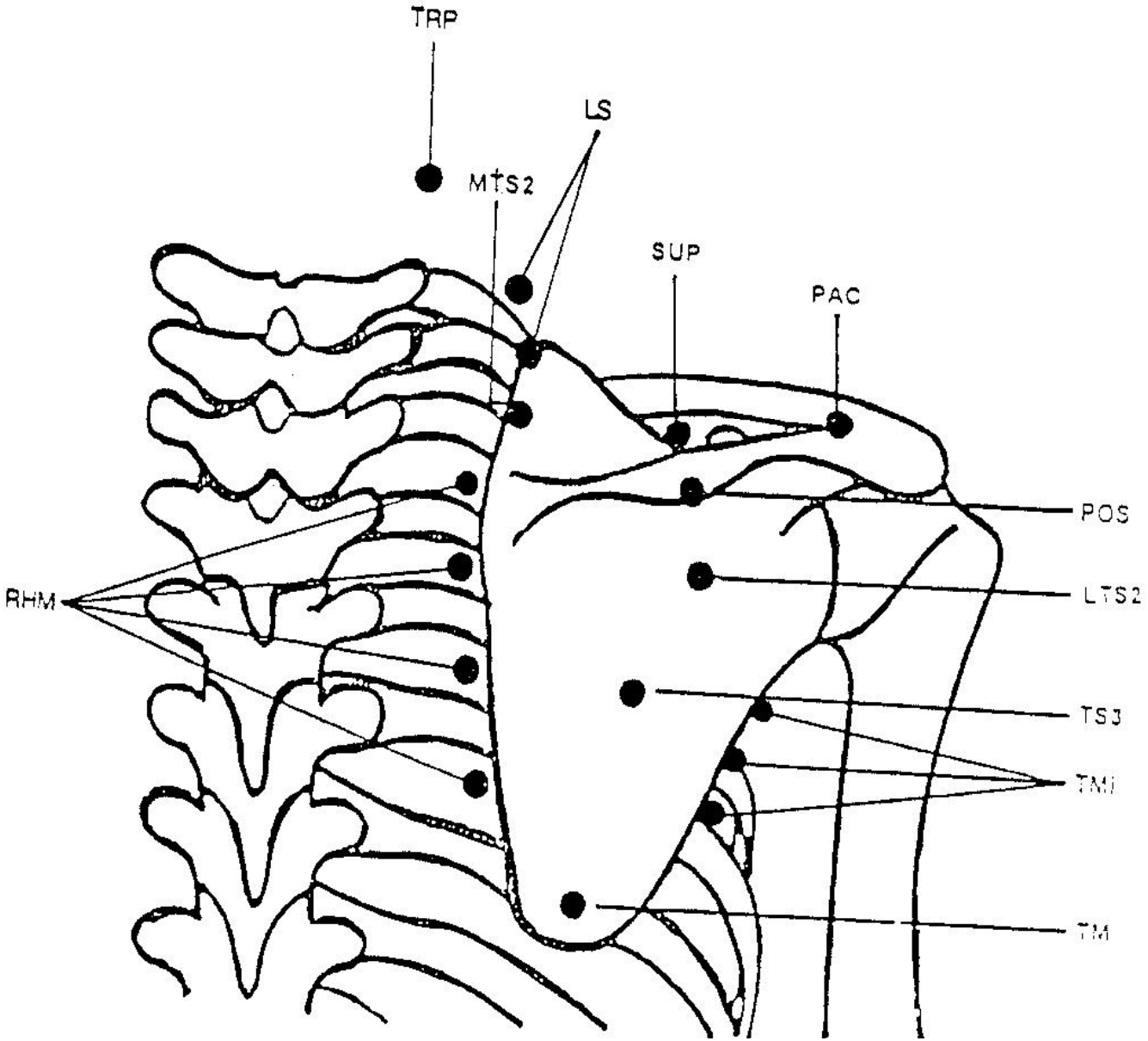
- Tender Point: Upper trapezius

- Treatment: Patient supine
  - Sidebend head towards
  - Flexion of arm overhead
  - Traction of scapula superiorly pulling on arm

Levator Scapula (LS)

- Tender Point: In muscle
- Treatment: Patient supine
  - Arm by side, elbow flexed
  - Sidebend head towards
  - Elevate scapula by pushing cephalad through humerus

POSTERIOR SHOULDER TENDER POINTS



Teres Major (TM)

- Tender Point:

- 1. Dorsal surface inferior angle of scapula
- 2. Posterior axilla, lateral to subscapularis point

Teres Major (TM)

- Treatment: Patient sitting
  - Extension of arm 30°
  - Slight adduction
  - Marked IR

Teres Minor (TMi)

- Tender point: Lateral border of scapula in belly of muscle

- Treatment: Patient sitting or supine
  - Extension of arm 30°
  - Slight adduction
  - Marked ER

Rhomboids (RHM)

- Tender Point: Medial border of scapula
- Treatment: Patient prone, arm by side
  - Clinician stands opposite
  - Adduction of scapula
  - Elevation of scapula