Balanced Ligamentous Tension (BLT) of Ribs and Pelvis

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Lab flow/timing:

Length	On hour start	Topic
10 min	00:00-00:10	Intro//personal centering//clinical pearls// review
15 min	00:10-00:25	Review BLT of Spine
15 min	00:25-00:50	Lumbosacral Decompression BLT
15 min	00:50-01:05	SI Decompression BLT
20 min	01:05-01:25	Supine Rib Release
20 min	01:25-01:40	Sutherland Rib Technique
10 min	01:40-01:50	Mediastinal BLT

Objectives:

1. Differentiate between myofascial release and balanced ligamentous tension including indications, targeted tissues, and sequence of technique.
2. Demonstrate accurate evaluation of ribs, lumbosacral and sacroiliac joints.
3. Practice and demonstrate the following techniques- see video technique library:
    - Supine Lumbosacral Decompression BLT
    - SI Decompression BLT (Long and short lever)
    - Supine Rib Release
    - Sutherland Rib Technique
    - Mediastinal BLT
4. Demonstrate ability to explain techniques in a manner accessible to the non-physician, obtain consent and respectfully engage tissues in potentially sensitive or embarrassing regions.

Pearls:

- Be intentional with layer palpation- for BLT we are palpating bone and perceiving their relationship with surrounding ligaments, for MFR we are palpating connective tissue to act upon myofascial structures.
- BLT is most successful when you can picture the anatomy of the specific ligaments you are working with while you palpate and move along the force vector through the specific ligament.
- Can be helpful/potent to add respiratory assist with any BLT technique.
- Supine long lever SI decompression: IR the leg to localize to the SI joint, rather than femuroacetabular joint.

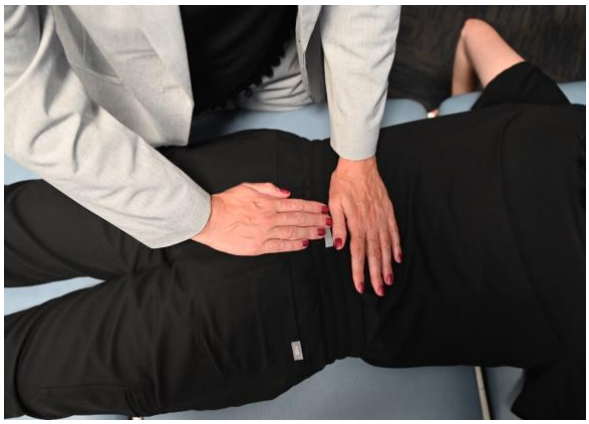
Techniques:

Lumbosacral Decompression BLT

Possible Clinical Indications: LBP, pregnancy
Possible TART Findings/Diagnosis: lumbosacral compression, TART changes over lumbosacral junction
Example Diagnosis: R lumbosacral compression
Patient Position: Supine
Physician Position: Side of patient

Treatment:

1. The physician places their cephalad hand on the lower aspect of the lumbar spine (L4-L5) so that the spinous processes will fall on the palmar crease with the thenar eminence and finger tips engaged on the paraspinal musculature.
2. The caudad hand will be on the sacrum with the finger tips pointing cephalad.
3. With the cephalad hand first, move the spine into a point of balanced tension in rotation, sidebending, and flexion/extension. Then do the same with the caudad hand, moving the sacrum as if it were a vertebrae into rotation, sidebending, and flexion/extension. (Note: the caudal contact can either go between the patient legs or from the side under the thigh depending on patient/practitioner preference and setting/context.)
4. Once both hands have positioned themselves and have found the point of balanced tension, hold until a release is palpate.
5. After releasing, reassess by inducing the same motions.



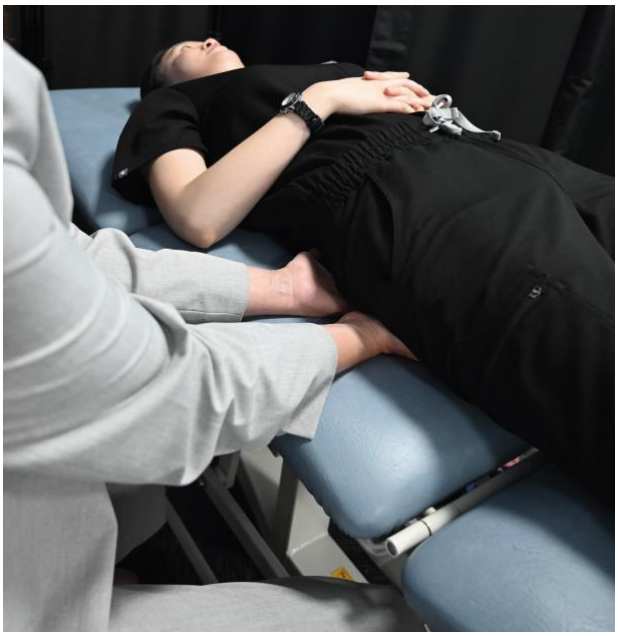
Supine SI Decompression BLT

Possible Clinical Indications: low back pain, hip pain
Possible TART Findings/Diagnosis: SI compression, decreased ROM along inferior, middle or superior axis of rotation of the SI joint
Example Diagnosis: R SI compression
Patient Position: Supine
Physician Position: Standing or seated at the table on ipsilateral side facing patient head

Treatment:

1. Place the cephalad hand beneath the pelvis with palm up and fingertips medial to the SI joint along the joint line.
2. For short lever: place fingertips of the caudad hand just below
3. For long lever: secure the patient's ipsilateral hip and straightened knee between your caudal forearm, elbow and body wall.
4. Internally rotate the patient's hip and femur to localize forces through the leg to the ipsilateral sacrum. Using the patient's femur as a long lever, balance tensions at the SI joint, using adduction/abduction, flexion/extension and compression/distraction.
5. Once tensions have been balanced, wait for a release which may be appreciated by a softening of the tissues under the cephalad hand.
6. Slowly return the femur back to a neutral position and reassess your patient.

Long Lever



Short Lever

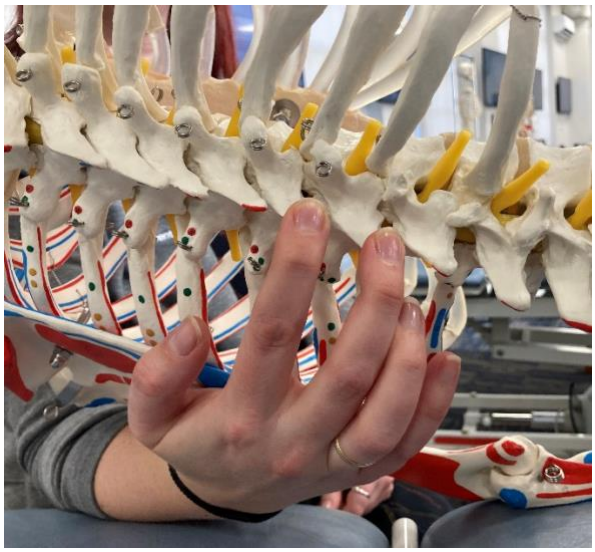
Supine Rib Release BLT

Possible Clinical Indications: Rib pain, upper and mid back pain
Possible TART Findings/Diagnosis: single rib restriction, inhalation/exhalation rib dysfunction
Example Diagnosis: R rib 7 posterior rib
Patient Position: Supine
Physician Position: Standing/seated ipsilateral on the side of the patient

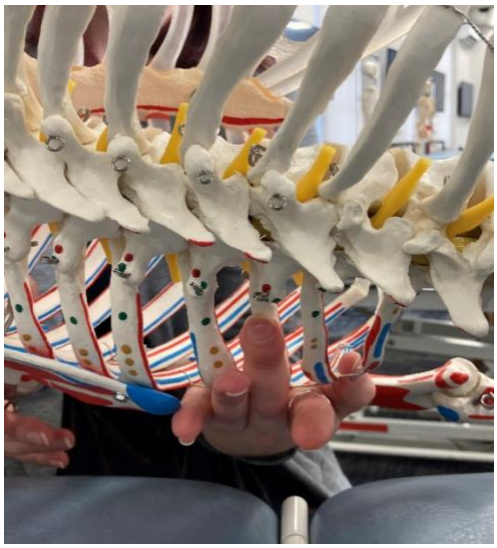
Treatment:

1. The physician places their index finger of their cephalad hand on the contralateral aspect of the spinous process above the rib to be treated, and places their middle finger of their cephalad hand on the contralateral aspect of the spinous process on the rib below medial to the rib angle.

2. The physician then places their middle finger of their caudad hand along the dysfunctional rib with the fingertip medial to the rib angle.
3. The physician induces an anterior force with both hands to engage the segments and rib and then draws both hands laterally towards themselves. The fingers on the opposite side of the spinous process will rotate the vertebrae away, putting slack in the ligaments at the costovertebral junction
4. The physician continues to engage the rib along the long axis on the shaft of the rib until a release occurs.
5. Reassess.



Cephalad Hand: Index finger and middle finger on spinous process



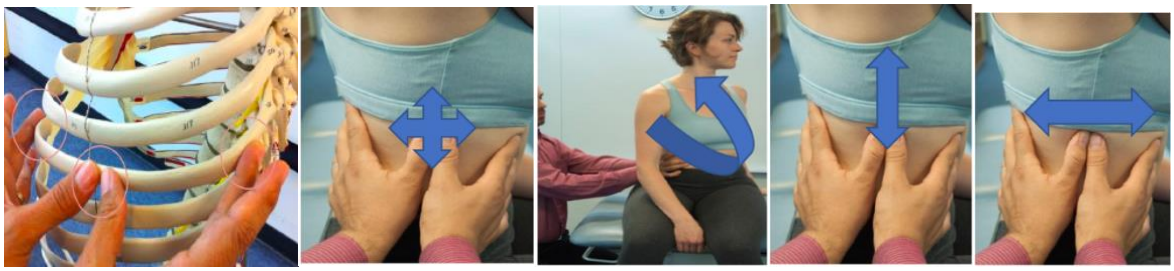
Caudad Hand: Middle finger on shaft of rib

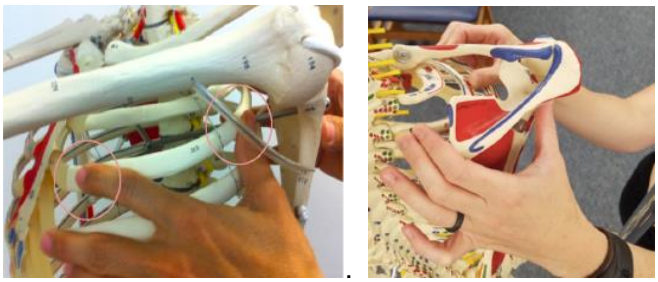
Sutherland Rib Technique

Possible Clinical Indications: Rib pain or thoracic back pain
Possible TART Findings/Diagnosis: single rib dysfunction or key rib in group dysfunction
Example Diagnosis: R rib 7 anterior
Patient Position: Seated at the end of the table
Physician Position: Seated next to and below the patient, ipsilateral to rib to be treated

Treatment:

1. Establish a secure contact on the dysfunctional rib and disengage the rib head by side bending the patient toward the physician in the lumbar spine, while side bending away from the physician in the thoracic spine to open the demi facets.
2. The weight of the patent should be fully supported at this point by the physician through the contact on the dysfunctional rib.
3. The rib is then translated in an anterior and posterior direction testing for ease and moving in the direct of ease to obtain balanced tension and hold this position while stacking other motions.
4. Next, ease is tested for elevation and depression keeping in mind bucket handle motion. The direction of ease is held to achieve balanced tension while stacking other planes.
5. Holding the above eases, instruct your patient to rotate their trunk away from the rib until balanced tension is achieved by the physician. The patient should keep their head erect during this motion and move it with the thorax as a unit.
6. The physician then fine tunes the previous induced motion including elevation and depression, translation anteriorly and posteriorly, and side bending away from the rib to achieve balanced tension.
7. Breath may be added as an activating force until you have achieved balanced tension.
8. Once you have reached a point of balance, you wait for a release, and once a release has been appreciated the patient can be returned to neutral and the dysfunctional rib can be reassessed.





*Remember that your contact may require navigating around the scapula and clavicle in the upper ribs.

Mediastinal BLT

Possible TART Findings/Diagnosis: Restriction or ease of motion superior/inferior, Lt/Rt, diagonal or CW/CCW over location of attachment of sternopericardial ligaments
Example Diagnosis: Superficial sternal ligamentous restriction
Patient Position: Supine
Physician Position: Standing at patient's side

Treatment:

1. The physician places their cephalad hand on the sternum over the superior sternopericardial ligament and the caudad hand on the sternum over the inferior sternopericardial ligament.
2. The physician gently and steadily compresses posteriorly, palpating the tensions as they slowly move through the layers of fascia superficial to the sternum, the sternum itself, and the ligaments deep to the sternum.
3. The physician then slowly tests superior/inferior, Lt/Rt, diagonal glides, and CW/CCW motions.
4. The physician then stacks into the ease or restriction in all planes.
5. The physician holds until a release is felt.
    a. Additionally, the physician can instruct the patient to take a deep breath or add a subtle vibratory activating force to facilitate further release.
6. The physician gently releases their contact.
7. Reassess.