



## PROTOCOL FOR COX® TECHNIC FLEXION DISTRACTION AND DECOMPRESSION OF DEGENERATIVE SCOLIOSIS

*This document covers often asked questions about stenosis treatment and the timing of manual and automated adjustment procedures.*

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1. 3 mobilization manipulation approaches: *Prone, Supine, Side-Lying*
2. All protocols start and continually monitor tolerance testing.
3. Preparatory care for all 3 protocols includes:
  - a. Patient placed with ASIS 2 inches cephalad on the thoracic section.
  - b. Deep Multifidus stimulation with pressure point, acupuncture, dry needling, massage
  - c. Electrical stimulation before or during distraction manipulation
4. **Prone** Distraction Mobilization Manipulation
  - a. Tolerance test by contacting at least 2 spinous processes cephalad of the top of the scoliosis
  - b. Apply manual distraction with flexion to point of interspinous process tautening and opening, asking if this causes any discomfort to the patient. If so, decrease to lesser force.
  - c. Lock the instrument in desired and tolerance-tested distraction. Contact the spinous processes on the side of convexity and gently, with tolerance-testing, laterally flex each scoliotic segment into lateral flexion. This distracts and mobilizes the convex curve into a greater vertical posture.
  - d. Tolerance test with automated distraction as in section C. If no adverse effect, couple long-y axis with lateral flexion into the side of convexity of the curve. Repeat this mobilization from top to bottom of the curve. Again, you can lock the instrument in desired distraction and perform the mobilization into the convexity of the curve; however, the coupling of the motion renders a controlled consistent distraction and reduced curvature.
  - e. Following mobilization manipulation, place electrical stimulation to the spinal muscles on the convex side of the curve. Tolerance test, and if allowed, add long-y axis distraction as the electrical stimulus is given.
  - f. Teach patient to do the Mehta-type contraction exercises for the quadratus lumborum muscle on the convex curve side.
5. **Supine** Distraction Mobilizing Manipulation
  - a. This is best starting manipulation for compromised patients with osteoporosis, advanced spondylotic degeneration, Kummel's disease, and those with other spine deformities such as osteoarthritic and rheumatoid disease.
  - b. Patient lies supine on instrument, pelvis on caudal section. In response to the patient's sagittal lordosis or kyphosis, gently place the instrument into distraction or manually distract. The patient's hands are clasped over the sternum, and they are contacted as distraction is delivered to stabilize the patient. The patient's knees are flexed and feet rest on the surface of the instrument.

- c. As distraction, either manual or automated, is delivered, two items of delivery are carried out:
    - i. Flex or extend the caudal section as distraction is delivered. This allows sagittal curve moderation with flexion of the caudal section adding lordosis to the sagittal curve and extension creating a flexed sagittal curve.
    - ii. As distraction is delivered, the spine is laterally flexed into the convex side of the curve. This allows a consistent, tolerance-tested mobilization of the scoliosis.
  - d. Electrical stimulation of the convex side of the curve can then be administered in the prone position as described in prone treatment.
6. **Side-Lying Mobilizing Manipulation**
- a. This position is preferred by many patients and doctors due to its leverage capability with minimal and well controlled spine mobility.
  - b. The patient lies on their side, convex side of curve down, with the pelvis on the caudal section of the instrument
  - c. In this posture, lateral flexion of the instrument will produce flexion and extension mobility of the spine and the flexion and extension motion of the caudal section will accommodate lateral flexion motion.
  - d. Start with manually controlled flexion and extension with tolerance testing and then lateral flexion into the convexity of the scoliotic curve. Distraction is initiated with manual flexion and lateral flexion depending upon patient tolerance. Automated long-y axis distraction is delivered as flexion of the instrument into the convexity of the curve is administered.
  - e. Circumduction of the scoliotic curve can also be administered by performing flexion and extension (*depending on sagittal curve correction desired*) as distraction is applied and the spine is laterally flexed. This is a combined mobilization the introduces maximum motion to the scoliosis segments. Again, tolerance testing is at all times monitored.
  - f. The electrical stimulation can also be delivered to the convex side of the curve as the caudal is flexed to reduce the scoliosis and long-y axis distraction if given.
7. In all three protocols, **home Mehta quadratus lumborum strengthening exercises** are taught.
8. **BEGINNING FORCE APPLICATION IN TREATING DEGENERATIVE SCOLIOSIS:**
- a. Start at 2 pounds of force at each vertebral segment while tolerance testing the patient' reaction
  - b. Increase the pounds of force as patient comfort allows until an individual segment accommodates 5 – 6 pounds of force. This level may require varying numbers of visit to attain.
  - c. Use up to 25 pounds of force for a column of vertebral segment distraction of 4 or more segments.

\*This is a good review article of scoliosis exercises. Mehta/side-shift is described in it as well.  
 Berdishevsky H, Lebel VA, Bettany-Saltikov J, Rigo M, Lebel A, Hennes A, Romano M, Bialek M, M'hango A, Betts T, de Mauroy JC, Durmala J. [Physiotherapy scoliosis-specific exercises - a comprehensive review of seven major schools](#). *Scoliosis Spinal Disord.* 2016 Aug 4;11:20. doi: 10.1186/s13013-016-0076-9. PMID: 27525315; PMCID: PMC4973373.