

PROTOCOL FOR COX® TECHNIC FLEXION DISTRACTION AND DECOMPRESSION OF SPINAL STENOSIS

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

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A START...

Every day chiropractic practitioners are called upon to treat increasing numbers of aging Americans with spinal stenosis as their diagnosis for neck, back, upper and lower extremity pain. Stenosis is defined as the narrowing of a body orifice and, in the case of spine-generated pain, stenosis is caused by the following:

1. Degenerative disc disease causing foraminal narrowing
2. Facet arthrosis
3. Ligamentum flavum hypertrophy
4. Endplate hypertrophy
5. A combination of the above 4 causes coupled with underdeveloped pedicles.

How does flexion distraction adjusting approach stenosis relief? 4 ways:

1. Increase of the intervertebral disc space height
2. Increase of the intervertebral foraminal area by up to 28%
 - a. Decrease of posterior disc bulge
 - b. Tauten the ligamentum flavum to reduce the “buckling” phenomenon of the ligament that results in sagittal stenosis of the vertebral canal
3. Decrease of intervertebral nucleus pulposus pressure from -39 to -192 mm. Hg. This is termed decompression in flexion distraction adjusting procedure. A centripetal or suction is instituted inside the nucleus to pull back disc protrusion.
4. Return physiological range of motion to the motion segments of the spine.

HOW IS FLEXION DISTRACTION ADJUSTING APPLIED TO THE SPINE?

2 WAYS:

1. MANUALLY APPLIED FLEXION DISTRACTION ADJUSTING -- This involves doctor hands-on adjusting as follows:
 - A. Standard tolerance testing is first performed.
 - B. Flexion distraction adjusting is performed at each specific level of the involved spine in the following manner:
 1. The doctor contacts the spinous process above the vertebral segment to be adjusted with one treatment hand.
 2. The doctor controls the tiller bar and table motion controls with the other hand.
 3. Protocol I (for patient with radicular pain) is used until 50% relief of the extremity pain is relieved.
 4. Protocol II (for patient without radicular pain or having attained 50% relief of the radicular pain) is administered either manually or automatically utilizing the automated long-y-axis table motion for lower extremity pain. *Remember: the cervical spine is treated manually **always** for both Protocol I and II.*

2. AUTOMATION-ASSISTED LONG-Y-AXIS ADJUSTING -- Automated long-y-axis treatment of spinal stenosis patients is often combined with manual flexion distraction adjusting. NOTE: For Protocol II patients -- a non-radicular patient, or a patient who has attained 50% relief of their lower extremity pain via manual flexion distraction treatment -- combined automated and manual flexion distraction adjusting can be administered (following tolerance testing) as follows:

- A. Either before or after* the manual application of flexion distraction adjusting, **automated long-Y-axis decompression** can be administered to the patient.

This is done by

- a. setting the depth of movement of the caudal section of the table according to patient height and comfort and
 - b. setting the time of application from 2.5 to 12.5 minutes.
 - c. OPTIONAL: The thoracic restraint belt can be used to isolate the application of long-Y-axis distraction to a specific area of the spine, i.e. placing the thoracic restraint at the T10 level will isolate distraction decompression from T10 to the lower lumbar segment.
- B. Following or prior to automated long-Y-axis decompression adjusting, **manual Protocol II adjusting** is added to the automated long-Y-axis adjusting by the doctor's *contacting the spinous process at a specific lumbar segment to isolate the distraction and range of motion* (lateral flexion and circumduction) of the facet joints. NOTE: AUTOMATED LONG-Y-AXIS DISTRACTION AND DECOMPRESSION IS COMBINED WITH RANGE OF MOTION ADJUSTING. IT PRODUCES A VERY SMOOTH, RHYTHMICAL, OSCILLATORY MOTION OF THE SPINAL SEGMENTS.

*** AUTOMATED LONG-Y-AXIS BEFORE OR AFTER MANUAL APPLICATION?**

- a. The answer is that it is decided between doctor and patient. Some patients prefer unattended long-Y-axis before manually controlled adjusting flexion distraction adjusting and some prefer it after. Some patients find unattended long-Y-axis adjusting extremely relieving of their stenosis induced back and leg pains. I prefer to apply unattended long-Y-axis distraction **after** manual flexion distraction adjusting for two reasons.
 - i. First, it allows the patient to be relieved of post-treatment discomfort caused by manual adjusting, which occasionally occurs in some patients. The reason for this is that the effects of distraction, that is being separated at specific spinal levels, is relieved by settling of the spine before weight bearing is produced by standing upright.
 - ii. Secondly, electrical stimulation is applied during unattended long-Y-axis distraction to reduce inflammation and sedate nerves; this allows further pain relief.
- b. Note: It must be said that many patients find long-Y-axis unattended distraction and decompression to be relieving of pain and they will prefer it before manual flexion distraction adjusting is applied. Regardless of the sequence of application, tolerance testing outcome will encourage or discourage one approach over the other.

One last point: In treating upper or lower extremity radiculopathy due to stenosis or disc herniation, I always initiate flexion distraction and decompression with manual application and no automated technic. As the patient notices relief of the extremity pain, as noted by centralization and reduced pain and neurological deficits, I start automated long-Y-axis automated adjusting. **Always** tolerance test the patient's response to initiating automated application. Automated long-Y-axis adjusting is very consistent application of force for the patient while affording the doctor an ease of effort in application.

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