

## The Coupled Adjustment

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The examination of the spine should include examining the motions of rotation, lateral flexion, flexion and extension. Linear longitudinal distraction capacity may also be tested. Spinal movements under normal circumstances during rotation and lateral bending are coupled. You cannot laterally bend without inducing some rotation, and visa versa. Therefore, it is imperative also to test for coupled rotation and lateral bending.

Allow me to use an evaluation of the cervical spine, testing coupling, to illustrate this concept. In the examination of the cervical spine, a contacted segment can be rotated to endpoint, where endplay restriction is tested. Many true fixation subluxations are missed, however, because lateral bending is not tested. This is especially true on the left side (or lateral bending may have been tested without first inducing rotation). For example, examining the left side of the neck for rotation may show no rotation restrictions; however, the symptoms reflect left-sided face and head pain. When C-1 is rotated left to right, with lateral bending over the contact induced simultaneously at various rotated positions, coupled rotation and lateral bending restricted regions can be located. Pure rotation and pure lateral bending may have revealed no restrictions. Coupled rotation and lateral bending can be the simultaneous inclusion of various positions of flexion to locate the most restricted endplay position with the best relaxation of the patient's muscle tissues. The adjustment is a continuation of the examination for joint restriction.

When examining the right side of the cervical spine, pure rotation at all levels usually surpasses the left side. Coupled rotation and lateral bending rarely presents as a fixation on the right side. In supine motion analysis, there are some frequent and major interesting patterns of right-sided motion and endplay restriction. A technique of motion analysis must be used to reveal these patterns. When examining the right side, the doctor must place the patient's head in his or her left hand, and then position the right index finger on the lamina or joint interspace to be tested. Rotation is induced to the left. Near the end of the rotation arc, the contact hand and index finger induce extension (creating coupled rotation and extension testing), while the left indifferent hand moves the head laterally to the right, extending the head and neck over the right contact point. This procedure will pick up on coupled rotation/extension restrictions. This restriction is partially relieved when adjustors adjust for rotation on the right side. One must be cautious about creating motion and relief, yet not increasing right anterior fixation, which is especially dangerous at the C-1 and C-2 levels.

This restricted right-sided coupled rotation/extension restriction has been found to be most common at the C-2/C-3 level, and occasionally the C-3/C-4 level. To adjust and release such a fixation requires the following: Perform a rotation thrust (right to left), with the right hand holding the head and the index finger on the fixation contact point, with the left hand and anterior forearm on the left side of the face and head. This is the same position as with the previous testing or analysis. Both hands work in unison, like rocking a cradle. Near the end of rotation, induce extension with your right hand and index finger, while pulling your left hand to the right, thus extending over your contact. The adjustment is the same as the testing, only more forceful and rapid.

This procedure should not be used for normal joints or borderline fixations. There should be a definite endplay lock to justify such a correction. Also, extension moves like these work less effectively with advanced age. This is not good for the elderly. It is a common fixation problem, however, with right-sided headaches and levator scapula syndromes.

Like any description of manual procedures, words, or even still photographs prove to have major deficiencies in helping the reader understand the protocol. One should observe or have the experience of dynamic procedures.

Correction procedures can be manual or instrument procedures. What I described has been manual adjusting. Instead of manual procedures, single or multiple-thrust instruments can be utilized. Often, the use of instruments with predetermined forces is more appropriate in such cases. Single-thrust instruments include Activator-type instruments; multiple-thrust instruments include Arthrostim, VP-II, etc. The multiple-thrust instruments have a greater variety of attachments, and can utilize summation of multiple pulses. The Activator and the similarly constructed single-thrust devices have an advantage of not overthrusting. Instrument adjusting is a detailed subject and requires a separate presentation as applied to the examples discussed.

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