

Proof of the Subluxation Complex

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I recently came across a medical monograph by Alf Breig M.D., that the profession should find interesting. It is a sequel to two other monographs by the same author and gives objective medical and objective scientific proof of the subluxation complex. The most recent work is, Skull Traction and Cervical Cord Injury. The two previous works were, Adverse Mechanical Tension in the Central Nervous System, and Biomechanics of the Central Nervous System.

Claiming proof of the subluxation complex is a heady thought, but it is there and you do not have to stretch to see it. The subluxation complex will have to undergo some expansions and some deletions, but that is how theory is improved. It is amazing how well D.D. Palmer did with what he had to work with.

Firstly, one must note that when nerve tissue is impinged upon, it stretches axially (along its length). This is noted in all three of the above references and objectively in live subjects as well as fresh cadavers and canines. Next, nerve tissues that are stretched to a certain very small extent (noted in the text as "perhaps only imperceptibly lengthened") are extremely liable to lose their conductivity.

"This has been verified by, among others, neurological surgeons¹, who have observed that critical tension of nerve fibers abolishes their conductivity and that their conductivity can be restored by relaxation of the fibers, as long as they are basically undamaged." This passage is from the most recent monograph but is referenced in the previous two as well as in many other papers on anatomy and physiology. (I did not do a literature search for this article, but I have been exposed to literature by Dr. Grace Jacobs, Ph.D. confirming this fact since my second year at Northwestern Chiropractic College).

So far, we have found, objectively, that pressing on a nerve stretches the nerve and reduces its ability to carry nerve impulses (conductivity).

The next major fact contributing proof to the subluxation complex theory is the entire thrust of Dr. Breig's objective experimentation which is that ventroflexion of the spinal column stretches the nerve tissue in the spinal cord and nerve roots (especially where there are firm attachments of the nerve tissue and meningeal sheaths to the spinal column at the occipitocervical spine region cranial and the lumbar spine-sacrum caudad), resulting in reduced conductivity, leading to neurological symptoms and damage to nerve tissue in the central nervous system. Dorsiflexion (extension) of the spinal column (not hyperextension) relaxes the nerve tissue of the brainstem, spinal cord (pons cord tract), and nerve roots relieving the axial stretching of the neurons returning normal conductivity of nerve impulses, which relieves the symptoms and neurologically induced dysfunction. Here we have Palmer's chiropractic, no?

Now we have, objectively, from Dr. Breig's work: Pressing on a nerve stretches the nerve; stretching the nerve reduces its ability to carry nerve impulses (conductivity); and if the nerve is not damaged,

taking the stretch off the nerve will relieve the symptoms and restore normal nerve function.

This means that any biomechanical problems that increase spinal flexion, thus increasing axial stretch on nerve tissue, will usually cause neurological symptoms or make them worse. Anything done to relieve the flexion and stretching will relieve the symptoms and restore normal nerve function where there is no permanent damage to the nerves themselves. This is subluxation complex theory.

Now comes a big problem. What happens when subluxations are reduced?

Because flexion of the column and cord is what causes stretching or tension on cord nerve tissue and the nerve roots, it is a reduction in flexion of the entire spinal column that must be a result of a reduction or correction of a subluxation complex. This is not a local effect. This is an entire spinal column and pelvis effect. The definition of a subluxation as a vertebra out of place relating to the vertebra above it and the vertebra below is a start, but that definition is inadequate. A proper definition must include spinal column flexion as well as spinal cord and nerve root stretching to fit the biomechanical facts. For all those attempting to eliminate full spine x-ray, I give notice that you are throwing away the main proof of the chiropractic subluxation theory.

I propose a definition of a subluxation or subluxation complex -- a vertebra slightly out of place that causes spinal column, cord, and nerve root flexion causing stretching of nerve tissue including the entire or local areas of the pons cord tract and nerve roots resulting in direct or indirect neurological symptoms. This definition fits the biomechanical and clinical facts. If you have something better that fits the facts, submit it.

Do subluxations cause the spinal column to lengthen? Do subluxations cause spinal flexion?

These are things that need to be researched on a full spine level. Dr. Breig writes about changes in spinal length visible on x-ray. As much as "one centimeter increase in length in the cervical spine alone" (sectional x-ray, not full spine), resulting from traction, causes not only cervical nerve root neurological symptoms but also objective lumbar nerve root neurological symptoms including objective loss of sensation, bladder control, and paresis. When the traction is released and the cervical spinal length is again measured on x-ray, it has shortened, allowing the spinal cord tissue to relax. Usually within a day or two, patients regain bladder control, sensation, and strength in both the arms and legs -- objectively noted and documented in many cases. However, the x-rays are mostly cervical x-rays. What happens in the lumbar spine and pelvis? These are areas for investigation by chiropractors.

Do you know what happens to the length of a person's spine when he sits compared to when he stands? A fairly clear full spine lateral view may be taken using the Bolin filter system but on most occasions a separate cervical lateral view will be needed for trabecular patterns.

What happens after one adjustment? Two? Ten? Twenty? There is currently a research project involving chiropractors, radiologists, and medical orthopedists: People are examined using MRIs. Some are adjusted and some are not. The MRI then is redone and examined for change. Virtually none of the adjusted patients have changed in the measurements. (It is a one set technique).

Doing the same type of investigation myself, using full spine radiography in place of MRI, the only significant finding I can demonstrate has been a very notable change in the length of the spinal column as measured with an opsiometer on George's line from Ferguson's sacral base angle line to the occipital base line. Do this investigation yourself. Some of you will find the spinal length decreases,

some will find it increases. Does this mean what you did increased the tension on the cord and nerve roots and made things worse? Some of you will find no effect.

As you can surmise from the above discussion, one of the things chiropractic needs and has always needed is an objective measure by which to judge chiropractic. I think Dr. Breig has provided a valid objective measure -- spinal length.

In *Adverse Tension in the Central Nervous System*, which is a manual for surgically setting the cervical spine in slight extension to slacken the pons cord tract, as well as researched and objectively documented explanation of the effect on neurological tissue, Dr. Breig identifies cord myelopathies, rhizopathies, neurogenic urinary incontinence, respiratory insufficiencies, cerebral palsy, various neurogenic painful spasticities, even multiple sclerosis and amyotrophic lateral sclerosis (ALS) as all being successfully treatable by spinal cord relaxation. The implications for chiropractic are enormous but objectivity in spinal length and spinal length changes by chiropractic adjustment must be established.

Let me close with a passage from Dr. Breig's *Skull Traction and Cervical Cord Injury* and comment that it indicates how valuable chiropractic can be if measured objectively.

In a disorder with such alarming symptoms as those in ALS, it would seem especially inappropriate to delay the simple surgical measure of keeping the neck fixed in slight extension while awaiting the approval of an ethics committee. When, therefore, a woman in her 50s was admitted to a hospital in Nancy, France, some years ago, suffering from ALS and cervical myelopathy, we followed the above programme and performed the cervicordodosis (CLD) operation, where the cervical lordosis is fixed, relaxing the spinal cord and brainstem nerve tissue. Within a few days not only was her spasticity diminished and urinary incontinence reduced, but her swallowing was also clearly facilitated. Some weeks after this operation we were informed that this patient continued to improve; however, we subsequently learned that she had died some months later after having been treated at a physiotherapy institution with -- among other measures -- forcible forward bending of her neck.

Dr. Breig notes that medical people are looking for enzymatic disturbances with ALS and multiple sclerosis, which has also been successfully treated by CLD and well-documented when the evidence is that these conditions are mechanical in origin.

"Mechanical origin" -- this should be music to chiropractic ears.

Which college will institute a research program that uses the simple expedient of measuring objectively, on radiograph, the length of the spinal column preand postadjustment and then correlate that with objective changes in function and changes in symptomatology? This would seem to be an inexpensive yet vitally important finding for chiropractic that could be run in the school clinics. Most of the histological and mechanical work on nerve tissue itself has already been done by Dr. Breig and others.

Which technique of reducing subluxations is the most effective? Does motion palpation identify subluxations as opposed to compensations? Does physiotherapy help chiropractic adjustments? Which technique is the most effective? Which is least effective? This research is neither expensive nor difficult and is easy to duplicate, so let's get busy.

When taking lateral full spines views, let the patients relax since you want them in the position where

the spinal column is working as the primary support structure.

Reference:

1. Alf Breig. "Skull Traction and Cervical Cord Injury." Springer-Verlag, New York, 1989. (Ref 20, 35, 42, 46).

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