

# Proceedings

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## Upper Cervical Specific Chiropractic Pattern Analysis in Patient with Paroxysmal Supraventricular Tachycardia

Michael Burcon BPh, DC

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**Introduction:** Evaluation of the relationship between upper cervical vertebral subluxation identified via pattern work based on paraspinal dermathermography and modified Prill leg length inequality tests. Blair x-ray analysis was utilized and toggle recoil adjustments performed when patient was in pattern. Subject is a 62 year old male diagnosed with Paroxysmal Supraventricular Tachycardia (PSVT) by his cardiologist. Heart rate variability testing was performed with BioSuite HRV 3.0. Patient's original chief complaint was low back pain. Case history included being ejected from a convertible at seventy miles per hour when 22 years old.

**Methods:** Initial examination: Thermography: C1 right Delta T 1.57 degrees C; presented with a one inch relative short right leg, no cervical syndrome, Prill tests: Atlas 1 ½" relative short leg; X-ray listing: C1 ASR; Heart Rate Variability: ANS activity 112, ANS ratio 30, and high parasympathetic tone with normal sympathetic tone.

**Discussion:** Patient presented on twelfth visit with absence of both pattern and lumbago. He continued care hoping to avoid ablative heart surgery for PSVT. Once patient presented in pattern with heart rate at 203 with high heart rate variability and high parasympathetic tone. After adjustment and 15 minute rest, heart rate was 80. Another time he presented in pattern with heart rate at 83 with low heart rate variability. After adjustment and rest, heart rate was 201 with high heart rate variability and increased parasympathetic tone, but the subluxation pattern had cleared.

**Conclusion:** Higher heart rate variability is not always better. There appears to be a relationship between improvements in pattern analysis with over-all health following an upper cervical chiropractic technique. It is feasible that upper cervical care can have a positive effect on the autonomic nervous system, and the heart via the Vagus nerve.

## Evidence in Action: Webster Technique – Not Just for Pregnancy: A Case Report

Rod Floyd DC, MSPH & Jasmine Perez DC

**Introduction:** Low back pain continues to be one of the top reasons the public seeks chiropractic care. Research has shown a relationship between low back pain and various factors, including degenerative disc degenerative, hypertonic musculature, vertebral subluxations, and sacral dysfunction.<sup>1</sup> A number of chiropractic techniques have been implemented to care for the patient with low back pain<sup>2,3</sup>, including Webster technique.<sup>4,5</sup> Webster Technique<sup>4</sup> is often used by family wellness chiropractors, particularly those that care for pregnant women. Much research has been conducted on the effectiveness of this technique of evaluation and treatment in pregnant populations.<sup>5,6</sup> We wanted to consider the use of Webster Technique for non-pregnant patients.

Webster Technique is a specific system of analysis and treatment of sacral dysfunction and its associated soft tissue components.<sup>4</sup> This technique was developed by Dr. Larry Webster, founder of the International Chiropractic Pediatric Association (ICPA).<sup>7</sup> Dr. Webster stated that this system of analysis was useful for analyzing and treating sacral dysfunction, regardless of pregnancy status.<sup>4</sup>

**Discussion:** A 73-yr. old woman had sought care at the Palmer College of Chiropractic outpatient clinic in Port Orange, Florida for low back pain, right leg and hip pain. Because of her age and history, we were looking for an intervention or management strategy that would not involve a standard high-velocity low-amplitude adjustment. As practitioners who use Webster technique for pregnant women with similar kinds of problems, we wondered if this might also be applicable to our current patient.

We used the Webster technique to adjust her. We based this on the work of Alcantara.<sup>8,9</sup> A sacral drop adjustment was used to reset the sacral segment. Pre-treatment outcome assessment scores were Back Bournemouth 50/70 and Lower Extremity Functional Scale 75/80. After 7 treatments, her Back Bournemouth was scored as 0/70 and Lower Extremity Functional Scale was scored at 0/80.

**Conclusion:** What does this mean for your practice? This paper suggests that the findings of Webster, as noted in the work of Alcantara, may be something one can consider in older women with specific kinds of low back problems.

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## **Pilot Study, Results of Reorganizational Healing Meta Model Applied to Adult Females During In-Residence Addiction Recovery**

Dominic Smorra DC

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**Objective:** This is a retrospective study of the data collected while clinically utilizing the Reorganizational Healing Meta model with a group of recovering in-residence, adult, female drug addicts. The objective data collected reflects the effects on the recovering addict's overall health, wellness and quality of life.

**Methods:** The Reorganizational Healing applications utilized were Network Spinal Analysis entrainments and Somato Respiratory Integration lecture workshops and hands on exercises. A total of eleven adult women, who were student members of Integrity House, completed the program. Physical examinations, surface electromyography, and spinal thermography exams were performed with each student member, as well as quality of life questionnaires and drawings done by each student member prior and at the completion of this study. The program lasted 9 weeks with a total of 15 care sessions.

**Results:** Each of the 11 student members exhibited the decreased occurrence of vertebral subluxation and increasingly complex neurologically mediated somato-sensory strategies pertaining to both NSA and SRI Levels of Care parameters. Spinal thermography revealed an overall increase in the symmetry of the temperatures from the spine. Improvements reflected from the quality of life questionnaire were statistically significant in all domains evaluated. Eleven out of eleven student members reported at the end of the program that they felt better prepared to handle life's stresses and that they were more capable of continuing positive lifestyle changes.

**Conclusion:** The findings in this pilot study support a hypothesis that ROH has, at minimum, a short-term positive effect on the health, wellness and quality of life of adult females in residence at an early stage addiction recovery program. Further research is warranted, with the inclusion of control subjects of each gender and also to provide for tracking of the student's progress over time to determine any potential long-term ROH benefits.

## Inter and Intra Reliability of Heel Tension Scale

Karen Feeley DC & Edward Owens DC

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**Background:** Neurodynamic tests are used to assess the nervous system's mechanosensitivity through monitoring the response to movements that are known to alter the mechanical stresses acting on the nervous system. In Chiropractic these tests are often used to assess the neurological component of the vertebral subluxation. Many of the tests used today stem from Alf Brieg's extensive work in the 1970's developing the concept of adverse mechanical cord tension (AMCT). In Network Spinal Analysis clinical assessments, adverse mechanical cord tension is considered through an evaluation of tension at the ankle, while performing the leg check protocols involved with Network Spinal Analysis.

**Objective:** To test inter and intra reliability of the measurement of adverse mechanical cord tension, using measurements of the flexion extension aspect of passive ankle movement, (termed heel tension).

**Methods:** Three experienced Network Spinal Analysis (NSA) practitioners examined 21 individuals, right and left ankles; at two different times. The examinees were lying prone on a table with the ankles over the edge of the table. The practitioners tested levels of tension while passively putting the ankle thru flexion extension. The amount of tension was graded from 1-mild, to 5-severe. The tension was also noted to be at the beginning of the maneuver or towards the end. Statistical analysis consisting of inter-class correlation coefficient (ICC) was applied to the heel tension data. Area of spinal tension data was analyzed using the Kappa statistics.

**Results:** We observed strong agreement with intra-reliability and moderate to strong correlation for inter reliability tests done for this data on measuring heel tension. The findings for assessing the area of spinal cord tension were fair for intra reliability and weak for inter reliability on this assessment of heel tension.

**Conclusion:** Intra and inter rater reliability are important characteristics that document the potential of a scale to produce stable results within and across assessors. Test – retest reliability is a pre requisite for scales that are to be used in a follow up situation, such as with Chiropractic care, and help to document its objectivity. Further research is warranted to validate changes in heel tension after subluxation centered chiropractic care and its relation to changes in quality of life and well-being.

## P.E.C. Experiences: An Updated Application of Terminology for Understanding the Cause of the Cause of Dis-ease

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**Introduction:** It is this authors belief that chiropractors have a moral obligation to educate the public about the cause of dis-ease. The cause of dis-ease is known as the vertebral subluxation. It is also this authors belief that chiropractors have a moral obligation to educate the public about the cause of vertebral subluxation. The cause of vertebral subluxation is the inability of Innate Intelligence to adapt to the environment in which it is subject to. All experiences that Innate Intelligence is subject to in its environment fall into one or more of the categories known as ones P.E.C. experiences. P.E.C. is an acronym for **Physical, Emotional, Chemical** experiences. This is an updated use of terminology originally set forth by the founder of chiropractic D.D. Palmer. His use of the terms Trauma, Toxin and Autosuggestion may have been appropriate for use in 1895, but seems to be antiquated or misunderstood at this time.

**Method:** An in depth look into the terminology used throughout the history of chiropractic has lead this author to believe that there may be a better way for chiropractors to communicate the cause of the cause of dis-ease to the general public so as to gain a better understanding of our principles and practice.

**Discussion:** Eighteen categories of P.E.C. experiences are possible at any given time in one's life. These experiences fall into three main categories: Positive, Negative and Neutral P.E.C. experiences. And two sub-categories: External and Internal P.E.C. experiences. Discussion will be made for each category.

**Conclusion:** A deeper understanding of the cause of vertebral subluxation is critical for the chiropractor and public as well to understand the reality of commonality of a situation that causes so much suffering for so many people. Better understanding leads to better utilization.

## Sacro Occipital Technique (SOT) Cervical Protocol: Analysis, Adjustment and Assessment: A retrospective case series [n=48]

Harvey Getzoff DC

**Introduction:** The intent of this paper is to present sacro occipital technique (SOT) methods of and rationales for analysis, adjustment, and assessment for patients experiencing cervical pain and dysfunction. A non-randomized retrospective sequential review of patient records at this chiropractic office [n=48] with presenting symptoms of chronic cervical spine restricted ranges of motion and pain was included in this case series review. The purpose of the assessment portion of this paper is to be able to measure incremental improvement as well as to be able to state, to the patient, the initial expectations of the outcome.

SOT chiropractic is based on identifying which of three functional systems, called Categories, is most in need of adjustment. Major Bertrand DeJarnette DO, DC, the founder and developer of SOT chiropractic says “to bring order out of chaos SOT offers the category system of analysis.”<sup>1</sup> Cervical spine-related problems and findings do not dictate the SOT category. Each of the three SOT categories is defined by SOT indicators, but each Category allows for cervical analysis, adjustment, and assessment within its framework. DeJarnette further states “SOT views the cervical column as part of the total and is responsive to that which helps the total respond.”<sup>1</sup>

Cervical analysis and adjusting within the SOT category system<sup>2</sup> can allow for a specific response to a specific cause while the cervical spine responds to the improved function of the system (category). Category 1 appeared to help improve dural membrane tension at C1, 2 and 3, category 2 reduced cervical responses to improved head position, and category 3 reduced cervical reactions to improved lumbar subluxations<sup>3</sup>.

**Methods/Intervention:** A review of patient records isolated 48 patients who presented at this chiropractic office with chronic cervical spine symptoms as their reason for seeking chiropractic care. Two of the patients were identified as category one, 32 as category two, and 14 as category three. Six of the 48 reported upper extremity radicular symptoms, with all six also determined to fit category two criteria. All patients were treated with SOT category analysis and treatment along with cervical stairstep assessment and adjusting. Each subject was advised about proper homecare of the cervical spine, which involved stretching, strengthening, and ergonomic modifications when appropriate.

Cervical range of motion tested for flexion, extension, right and left rotation and right and left lateral flexion. It was performed by standing behind the seated patient and gently assists the patient to make these movements while maintaining no shoulder movement. A flexometer was used initially to record the exact range of motion. Of the 48 patients observed six had difficulty with extension (chin up), 27 had difficulty with flexion (chin to chest), 46 had difficulty with at least one direction of rotation (chin to shoulder) and 43 had difficulty with one direction of lateral flexion (ear to shoulder). The standards measured in degrees used are flexion 50 degrees, extension 60 degrees, lateral flexion 45 degrees, and rotation 80 degrees.

**Results:** Of the 48 patients studied, improvement of range of motion function was noted in all 48. Each subject was adjusted at least five times within a six-week period. Of the 48 patients studied 46 had rotational limitation and 43 of them had cervical lateral limitations. Of the 48 patients all but three reported a decrease of cervical pain and a return to full activities of daily living. Those three patients that did not report a significant decrease in cervical pain within the 6 week period and had reported upper extremity radicular pain were radiographed and spur formations along with other degenerative findings were noted on their x-ray report.

**Discussion:** SOT cervical techniques (stairstep and figure 8) are designed not only to adjust the cervical spine, but to continually analyze and assess the technique’s progress during the adjustment. DeJarnette notes that utilizing the stairstep and figure 8 adjustments “these particular cervical techniques combine analysis and corrections.”<sup>5</sup> DeJarnette further stated that “there are many neurological and orthopedic tests that have value in making a detailed study of the cervical spine and you should be familiar with all or some of them.”<sup>1</sup> Rene Cailliet, MD remarked in his book on “Neck and Arm Pain” that “pain in and from the neck results from the mechanical factor of encroachment of space and impairment of motion.”<sup>6</sup>

Chiropractors can utilize range of motion techniques, motion palpation, and stair-step and figure 8 techniques along with x-ray and MRI studies to determine the expected outcome (removable, reducible or irreversible) [**Principle #1**]. By localizing, understanding, and classifying, one can not only define expectations but also monitor progress from adjustment to adjustment [**Principle #2**]. All of this information can be communicated to the patient not only at the initial office visit but at each subsequent adjustment.

These actions can set the boundaries (treatment plan), expectations and goals of each case presented. These principles appear to have roots in the very beginning of Chiropractic. DD Palmer stated in his book “The Chiropractor’s Adjuster” that “Diagnosis is the act of recognizing disease and from its symptoms deciding as to its character; what lesions have occurred and will occur, how long it will endure and what will be its probable outcome.”<sup>7</sup> DD Palmer also noted “The medical man prescribes remedies for the treatment of effects. The Chiropractor adjusts the cause of deranged functions.”<sup>7</sup>

**Conclusion:** Utilizing SOT category system analysis and cervical stairstep assessment and treatment may offer chiropractor the ability to reproducibly assess, treat, and reassess patients for improvement in cervical articular facet intersegmental and overall cervical range of motion. The majority of patients [n=45] in this retrospective case series showed increases in cervical range of motion and reduced pain. Of the three patients whose cervical pain did not resolve within the six week period they were found, following x-ray, to have complex cervical joint osteoarthritic conditions. Greater studies with controls and comparative therapies should be performed to better determine the efficacy of using SOT category and cervical stairstep analysis and treatment with patients presenting with cervical pain and decreased range of motion.

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# Gastroesophageal Reflux Disease (GERD) and Sacro Occipital Technique (SOT) Chiropractic: A Case Report

Harvey Getzoff DC

**Introduction:** The intent of this paper is to study the Sacro Occipital Technique (SOT) chiropractic care of a patient experiencing a sore throat, heartburn, and difficulty swallowing along with various digestive symptoms such as cramping, bloating, and stomach pains. This patient was medically diagnosed and treated for gastroesophageal reflux disease (GERD). GERD is defined as a “chronic symptom of mucosal damage caused by stomach acid ascending from the stomach into the esophagus ... Common symptoms of GERD are heartburn, regurgitation and pain with swallowing.”<sup>1</sup>

GERD is usually caused by changes in the barrier tissue between the stomach and the esophagus, the lower esophageal sphincter. Diaphragmatic imbalances adversely affect this sphincter, which normally holds the top of the stomach closed, preventing acids in the stomach from traveling back into the esophagus where they can cause burning and inflammation of the sensitive esophageal tissue. “GERD is a condition where the acid in the stomach washes back up into the esophagus.”<sup>2</sup> “Since the esophagus lacks the protective lining of the stomach it is easily irritated by digestive juices.”<sup>3</sup>

The diagnosis is usually made based on patient presentation and symptomatology.<sup>1,2</sup> The medical treatment for GERD includes lifestyle modifications, medications and possible surgery. Initial medical treatment is frequently with a proton pump inhibitor such as Omeprazole (Prilosec). “Omeprazole is used to treat certain conditions where there is too much acid in the stomach. It is used to treat gastric and duodenal ulcers, erosive esophagitis and gastroesophageal reflux disease (GERD).”<sup>2</sup> This paper studies a successful outcome of a patient experiencing the effects of GERD that was treated by SOT chiropractic methods.

## Case Study

**Assessment/Considerations:** A 43 year old female patient, presented on August 7, 2012 experiencing a sore throat, heartburn, difficulty swallowing, and various digestive symptoms such as cramping, bloating, and stomach pain. She also reported predominantly left-sided neck pain with bilateral upper back pain and seasonal allergy symptoms. The patient was regularly taking Omeprazole (Prilosec) (for 2 months) and Xanax for clinical anxiety, along with over the counter allergy medication as needed. The patient consumed a gluten and dairy free diet.

An examination, with an emphasis on SOT methods of analysis, was performed.<sup>4,9</sup> While standing in front of a plumb line on a fixed foot plate with eyes closed, the patient had lateral motion, a dominant left Thoracic 1/first rib subluxation finding<sup>4,9</sup>, a left lateral spinal curve, and head position was tilted to the right of the plumb line. In the prone position there was a subluxation (tenderness and tension) at the thoracic 5 vertebrae along with a line 2 area 3 occipital fiber.

According to DeJarnette, “Occipital fiber technique locates and adjusts subluxations which can be utilized to help identify specific viscerosomatic/somatovisceral reflex organ reflex disorders, while incorporating specific soft tissue therapies. This system allows for the management of dis-ease while providing a philosophy of care.”<sup>4-8, 10-13</sup> A line 2 occipital fiber 3 with a thoracic 5 subluxation identifies a gastric reflex problem.<sup>10-13</sup> Given the non-invasive nature of an SOT adjustment, it was determined that with SOT treatment subjective and objective improvements to her GERD presentation were possible at a low risk to the patient.

**Treatment/Intervention:** SOT category 2 adjusting methods were utilized, inclusive of SOT blocks<sup>4-9,14</sup>, cervical stair step and figure 8 adjusting<sup>4-8,15,16</sup>, and cranial suture adjusting primarily at the right maxillary malar suture.<sup>17-19</sup> Incorporated into the SOT category 2 adjusting method was the Line 2 Occipital Fiber Technique, Thoracic 5 line 2 adjusting, and SOT Chiropractic Manipulative Reflex Technique (CMRT).<sup>13,20,21</sup> No additional dietary changes were discussed.

Because her sore throat, swallowing and heartburn were a primary concern, the patient was advised as to the method of voluntary swallowing. “When the food is ready for swallowing it is voluntarily squeezed or rolled into the pharynx by pressure on the tongue upward and backward against the palate. From here on the process of swallowing becomes almost entirely automatic.”<sup>22</sup> The patient was advised to swallow each bolus of food and each gulp of water as if swallowing a large pill in order to develop the voluntary swallowing reflexes. Basic findings were analyzed at each adjustment and compared to the previous adjustment to note changes. All homecare advice and subjective and objective improvements were discussed - when the patient presented for subsequent adjustments.

**Results:** Cranial adjusting, cervical adjusting, and category 2 blocking along with specific cervical home care instructions improved both the cervical ranges of motion and helped reduce the level of cervical pain. Measured cervical right rotation initially at 80 degrees improved to 90 degrees. The line 2 occipital fiber, the associated thoracic vertebrae (T5) subluxation, and the anterior soft tissue reflexes were still present, yet were less sensitive to palpation, according to the patient. All GERD related symptoms were greatly improved. The patient-instituted dietary changes were continued, as was the swallowing exercise.

As she improved symptomatically she chose to eliminate the medication (Prilosec) and replace it with a digestive enzyme containing hydrochloric acid. She achieved all of these effects over a two month period during which she received 13 adjustments before transitioning to a monthly maintenance treatment regimen. Presently, 16 months after her initial visit, she is symptom-free receiving chiropractic care once per month, adhering to her diet and enzymes, performing her swallowing exercises, and continuing her cervical spine homecare activities. Her improved findings have all been maintained. The patient realizes that the continual chiropractic and self management of her condition is necessary even though her symptoms have dissipated.

**Discussion:** The occipital line 2 area 3 fiber in conjunction with palpation tenderness of a transverse process of thoracic vertebra T5 and the anterior reflexes all became less tender and sensitive as the chiropractic adjustments proceeded. Clinically this is found associated with improvement of gastric function.<sup>23-26</sup> The occipital fiber is stimulated by rubbing, the T5 related subluxation is adjusted for a posterior transverse process, the anterior reflexes (CMRT) consists of left thumb web stimulation while maintain a light touch to the contacted abdominal tissue.<sup>20</sup>

This occipital fiber technique is a diagnostic and treatment system, incorporating Golgi tendon organ reflexes located on the posterior occiput. Dr. DeJarnette found that occipital fibers reacted to spinal cord pressures which were responding to neurologic disturbances at specific regions of the autonomic nervous system (ANS). This imbalance in ANS activity causes a compensatory somatic reflex at the spinal segment involved. Line 2 therapy uses a finger stroke to the involved fiber and a posterior to anterior transverse process adjustment to the subluxated vertebrae. This sets the stage to establish pre and post-ganglionic reflex control using soft tissue visceral manipulation (CMRT).<sup>13,20,21</sup>

Along with the care rendered the patient had home activities and ergonomic modifications. She performed these activities by maintaining her diet modification as well as the swallowing exercise and cervical homecare (sleeping, reading, television watching, and computer work postures) which helped sustain improvement and reduce the chances of her condition returning.

**Conclusion:** This case discusses the chiropractic care of a patient who presented with symptoms diagnostic of Gastroesophageal Reflux Disease (GERD). SOT category 2 chiropractic, as developed by DeJarnette, assessments and adjustments were used along with specific homecare modifications. The patient showed a great amount of determination and responsibility, which was a significant factor in the success of her recovery. Since the symptoms and the examination findings that determined the diagnosis have dissipated, it appears that the interventions as presented in this case study were successful. Because this is a singular case study with no controls or comparisons, it is inappropriate to draw conclusions for the greater population that experiences GERD symptoms. However, this case study's method of clinical care could be useful in the management of patients with GERD symptoms. Further research and study is needed into the role of the interventions studied in this case report.

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## Can Research and Philosophical Chiropractic Co-Exist?

Joe Strauss DC

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Research appears to foster the empirical, outside-in, experience oriented approach to understanding and validating chiropractic as an effective alternative to addressing medical conditions. and in doing so negates, or contradict the rational, deductive and philosophical approach or at least belittles it, purporting to make it unnecessary. Can research and philosophical chiropractic co-exist? More specifically can chiropractic as a biological science adopt the research methods and systems associated with the natural sciences of empiricism and naturalism. Can chiropractic philosophy and outside-in empirical research, co-exist and if so will this reduce the value of chiropractic care, having the opposite effect that it is intended to have? Lastly is there a place for research in chiropractic, consistent with its a priori, deductive philosophy, that will improve the public's understanding and acceptance of our profession?

## Intervention in Menorrhagia through Chiropractic Adjustment and Spondylotherapy: A Case Report

William Boro DC

**Introduction:** Low back pain and female reproductive problems are the source of frequent consultations to a chiropractor. Low back pain, as one might expect, is the most common reason<sup>1</sup> and is generally found to have its etiology to be of biomechanical musculoskeletal origin. However other sources of referred back pain may be uterine conditions such as endometriosis and adenomyosis.<sup>1,2</sup> Although dysmenorrhea is a common female condition and Radler<sup>3</sup> states that 72% of patients with dysmenorrhea also have low back pain (twice as much as women without dysmenorrhea), there is little chiropractic literature relating to this condition.<sup>1-15</sup>

Menstrual disorder is the only female reproductive condition that chiropractors see more than rarely as reported in the National Board of Chiropractic Examiners' job analysis report.<sup>2</sup>

Menorrhagia, described as excessive uterine bleeding, yearly affects up to 10 million American women in their forties and fifties. However, according to a survey performed by Shapley, Jordan and Croft in 2002, less than a third of women over 35 suffering from heavy bleeding actually discussed the problem with their doctor. Most of them (83%) expressed that the heavy periods were just something with which they would have to live.<sup>2</sup>

The purpose of this case report is to describe the clinical course, treatment, and immediate response of a female patient suffering from uncontrolled uterine bleeding of over two weeks duration to the application of chiropractic adjustments and the use of spondylotherapy.

**Patient History:** A 5'4", 164 lb., 37 year old, nulliparous female veterinary technician with a history of back and hip pain, headaches and asthma presented to this office with complaints of severe pain in her left hip. The patient indicated that her menstrual cycle has never been "normal", and since the age of 16 her cycles were of 36-45 days duration with bleeding lasting about seven days. On her heaviest days of bleeding, days 2 and 3, she had to use a super plus tampon every 1 – 1 ½ hours. This calculates to more than 80 ml of blood on each of those two days. She stated that her periods were often accompanied with migraines and significant cramping.

**Methods/Intervention:** Three treatments were performed to care for this patient's specific menorrhagic condition. Initially Sacro Occipital Technique<sup>16</sup> Category II supine block placement to reduce pelvic torsion subluxation and improve sacroiliac joint juxtaposition; with patient in standing posture and assuming postures of flexion, extension, lateral flexion, and rotation adjustments were made to the lumbar spine (L1-5) with an activator instrument; and adjustments to femoral heads bilaterally.

Spondylotherapy<sup>17-19</sup> was administered to C7 (4 minutes), L3 (2 minutes) and L5 (2 minutes) at a percussive rate of 200 beats per minute.<sup>20</sup> Adjustments were made to T3, 5, 7, 9 vertebrae levels and their discs. Disc adjustments were performed utilizing a disc plexor according to Van Rumpft protocol. Van Rumpft's cranial analysis and treatment involved subluxation listings on the temporal, sphenoid and mandibular bones.

**Results:** Patient reported that the bleeding had stopped shortly following treatment. The patient has returned to this office on 8 other occasions (last visit February 19, 2014) for various reasons (mostly for hip pain), but has had no menstrual or bleeding complaints throughout this time.

**Discussion:** Chiropractic care can offer conservative therapeutics with the goal of improving neurology and physiology to facilitate the maintenance of normal homeostasis of all systems.

Several studies have been written describing the use of Sacro Occipital Technique in the management of female reproductive problems such as secondary amenorrhea,<sup>21</sup> uterine fibroids,<sup>22</sup> dysmenorrhea.<sup>23</sup> Through use of Chiropractic Manipulative Reflex Therapy, with or without combination of acupuncture methods, there was successful resolution of symptoms.

Altered mobility or fixation of spinal segments has been hypothesized to cause abnormal somato-somato and somato-autonomic reflexes. Liebl et.al.<sup>5</sup> point out that areas of primary fixation were at L1, 2 and 5, sacrum and sacroiliac joints. Various hypotheses are offered in the literature as to why non-medical approaches to dysmenorrhea help.<sup>6,19,24</sup> Various chiropractic hypotheses include "the removal of mechanical joint fixations correct aberrant motion and elicits a sympathetic response to inhibit uterine contraction"<sup>12</sup> or that the adjustment "interferes with pain reflexes that link the mental interpretation in the cerebral cortex to the physical manifestation of pain in the uterus,"<sup>15</sup> or how the psoas muscle may be involved in pain referral from the uterus.

**Conclusion:** Caution about generalizing these results to other patients is advised since without control groups or comparative sham interventions positive findings may relate to the placebo or ideomotor effect. Of interest is that the patient had the menstrual condition for years. Her response to care suggests a temporal relationship between the intervention and her positive response. That her condition has improved and has sustained itself is suggestive of this relationship, though it might also be considered to be coincidental or a regression to the mean. Further research is needed to determine if the care rendered in this case study might offer a low risk alternative for menorrhagia for a subset of patients that may be responsive to this novel chiropractic intervention.

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## The History of Temporal Sphenoidal (TS) Diagnosis and its Clinical Applications

Kenneth Y. Davis DC & Charles L. Blum DC

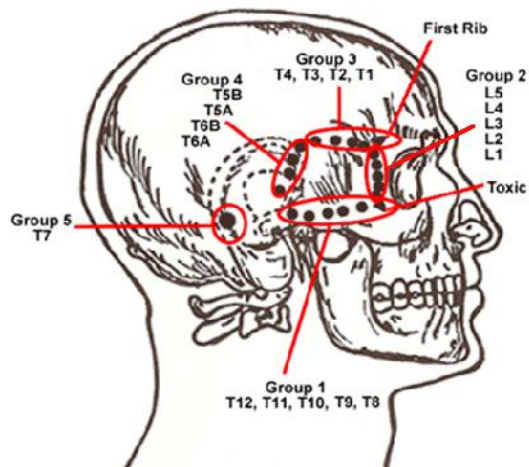
**Introduction:** When treating patients it is often essential to find some way of generalizing their presentation so we can assess how to treat a patient and follow their progress. Commonly in chiropractic, orthopedic and neurological tests are used to gain a generalization into the patient's presentation, determine what care might best be rendered and whether the patient has a positive response to this care.

Temporal sphenoidal (TS) diagnosis is an assessment tool discovered by Major Bertrand DeJarnette<sup>1</sup> and developed by M. L. Rees<sup>2-4</sup> in the 1960s [Figure 1]. TS diagnosis is based upon palpatory exploration of the circumference of the greater wing of the sphenoid and temporal bones assessing regions of swelling and/or sensitivity to the patient. Rees considered this TS ring to be a kind of master control panel "circuit breaker box" for all vital functions in the human body helping to isolate the most active spinal subluxations. He believed that a stressed viscus anywhere in the body flashes its distress (viscerosomatic reflex) signal to the brain through this control panel. He purported that when these reflexes are received at the TS region, the brain interpreted this signal, assessed the vertebral subluxations, and sought to regulate or improve the function of the distressed viscus.

In the early 1960's, DeJarnette handed the TS research project to Rees. In 1963, Rees reported he had observed an interesting change that occurred before and after a chiropractic spinal adjustment in the area of the patient's external auditory meatus. This occurred at the Aladdin Hotel in Kansas City, Missouri, at the annual Sacro Occipital Technique Clinic. Preliminary physical examination purportedly determined that a tortuous external auditory canal was found. After a sacro occipital adjustment, it appeared that the ear canal had normalized, even though direct treatment was not rendered to the ear canal. This clinical response confirmed to Rees the need to follow up on the work of DeJarnette since he believed the patient's response suggested that the temporal bone was connected in some way to body function.

### The General Screening:

General screening is a technique for testing multiple TS points as a group in search of "active" or sensitive points indicating an active reflex. This screening technique allows the doctor to isolate the most sensitive TS point by palpating the reflex points utilizing five pounds of finger pressure. While palpation for pain is the most reliable method of assessment, Rees also incorporated what DeJarnette called "Mind Language Testing"<sup>5</sup> or Goodheart called "Therapy Localization"<sup>6</sup>. DeJarnette and Goodheart's assessment methods utilize pre and post testing; most commonly evaluating patient's straight right arm strength when contacting the various TS points.



**Figure 1: The 5 general screening**

As a means of isolating the most active TS point(s) Rees developed five screening groups as depicted in Figure 1 and outlined below.

TS Group 1: consists of six TS points: Subluxations at T12, T11, T10, T9, T8 plus the "toxic" point.

TS Group 2: consists of five TS points: Subluxations at L1, L2, L3, L4, and L5.

TS Group 3: consists of five TS points: Subluxations at First Rib, T1, T2, T3, and T4.

TS Group 4: consists of four TS points: Subluxations at T5B, T5A, T6B, and T6A.

TS Group 5: consists of a single TS point: in front of the asterion landmark for a subluxation at T7.

**Localizing Primary TS Active Point(s):** After "active" TS points are identified by General Screening within one of the TS screening groups, the next step is to further assess which is the most active point. The testing is the same as with group screening either using up to five pounds of palpation or Mind Language Testing of the specific TS points to find the most sensitive or reactive TS point. The temporal sphenoidal reflex points on the skull have an associative point—sometimes two points—mapped to each spinal level.

**The TS Reflex Points:** Rees taught that the TS reflex points are a representation of the primary musculoskeletal symptoms for each spinal major subluxation syndrome as well as those that have a viscerosomatic or somatovisceral reflex relationship. TS reflex areas become sensitive when a vertebra is subluxated sufficiently to affect a viscus and create afferent nociceptive stimuli. Ideally the TS points can be used as pre and post assessment tools as the palpatory tenderness should resolve following spinal subluxation correction.

**Discussion:** Rees' methods were very novel and innovative for the 1960-1990s when he was teaching his various assessment and treatment modalities. Initially the TS points were a significant clinical breakthrough for him and those who studied with him. Regretfully while he performed extensive clinical studies to develop his methods of care he did not publish these in peer review journals. His methods were not studied for reliability or validity; however, the doctors who studied with him found that the patient's response to care was significant.

The challenge is determining if a viscerosomatic reflex is able to affect a spinal segment and have a supraspinal relationship. Cervico found that "the number of nociceptive afferent fibers in viscera is very small but these few nociceptive afferents can excite many second order neurons in the spinal cord which in turn generate extensive divergence within the CNS, sometimes involving supraspinal loops<sup>6</sup>." He found that this divergent input can trigger several systems -- sensory, motor and autonomic -- creating "reactions that are characteristic of visceral nociception: a diffuse and referred pain, and prolonged autonomic and motor activity<sup>6</sup>."

It is postulated by Rees that a discrete form of visceral referred pain secondary to spinal subluxations coordinates in specific regions on the body as well as at the TS points. Procacci and Maresca suggested that specific regions of referred pain may be, "generally comprised in the same metameres<sup>7</sup>." They found that different pathogenic mechanisms may be involved in the onset of referred pain such as "convergence of impulses in the central nervous system and reflexes inducing muscle contraction, sympathetic activation, and antidromic activation of afferent fibers, which induces so-called 'neurogenic inflammation.'<sup>7</sup>" Benarroch also found that "Spinal and visceral afferents provide converging information to spinothalamic neurons in the dorsal horn and to neurons of the nucleus tractus solitarius and parabrachial nuclei<sup>8</sup>."

At this time the goal of those utilizing Rees methods is to begin the arduous task of developing an evidence base of literature. Presenting it in an historical manner is a beginning. However, critically evaluating Rees' assessment and treatment protocols is necessary to determine if there is a biological plausibility to his methods. Since spinal viscerosomatic/somatovisceral reflexes and related treatments are difficult to study, it is important to report clinical outcomes comparing patient groups to controls or other types of interventions.

**Conclusion:** The TS point assessment, as described by Rees, offers the doctor a rapid assessment of the health of the body using the network of relationships between the TS points, spinal subluxation segments, viscera, and soft tissue. Through decades of clinical study Rees mapped out these reflex relationships and incorporated them into clinical care leading to positive clinical outcomes. With this novel and complex manner of assessment and treatment, further study into its biological plausibility as well as determining its reliability and validity will be needed.

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# Exploring a Potential Role for Vertebral Subluxation Based Chiropractic Care in the Sport of Olympic Weightlifting: A Narrative Review

Matt Hartenburg DC

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## Introduction:

The sport of Olympic Weightlifting requires balancing intense training sessions and ample recovery methods to optimize strength gains. (1) The autonomic nervous system plays a crucial role in this balance.(2,3) Strength training sessions elicit a sympathetic response and parasympathetic activity mirrors recovery while returning to a rested state. (4) Chiropractors have long asserted that overall health and homeostasis is achieved through the Autonomic nervous system (ANS), and that Chiropractic adjustments for the purpose of removing vertebral subluxations may modulate autonomic tone. (5) The objective of this review is to examine literature documenting the effects of chiropractic adjustments on autonomic tone and explore potential clinical benefits to an Olympic weightlifter.

## Methods:

Chiropractic, adjustments, autonomic nervous system, sympathetic, parasympathetic, and weightlifting were keywords searched in pubmed in search of literature relevant to the topic.

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**Discussion:**

Six studies were found relating to the role of the nervous system in training and recovery. These studies point to the nervous system as having a crucial role in the recovery of an athlete following training sessions. (2,3,4,6,7,8) They also support the contention that optimization of parasympathetic nervous system function is crucial for recovery of an athlete between training sessions. (4,6,7,8) It is also suggested that an excess of sympathetic tone may lead to overtraining syndrome. (3)

Seven studies were found showing a direct effect on autonomic tone as a result of Chiropractic adjustments of vertebral subluxations. (5,9,10,11,12,13,14) These studies indicate a favorable response in sympathetic and parasympathetic activity following chiropractic adjustments measured through heart rate variability, edge light pupil cycle time, distal skin temperature, blood pressure, and pulse rate.

**Conclusion:**

The data reviewed supports the hypothesis that specific chiropractic adjustments can elicit an autonomic response that is favorable for an Olympic weightlifter in training. Further studies should be conducted to evaluate the effects of vertebral subluxation based Chiropractic care on autonomic function in a population of Olympic Weightlifters during training.

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## A Review of Recent Attempts and Successes at Chiropractic Scope Expansion

Matthew McCoy DC, MPH

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**Background:** Over the past several years several regulatory bodies, state and national associations have been working to expand the scope of chiropractic practice to move beyond the analysis and adjustment of vertebral subluxation.

**Methods:** A review of journal articles, trade journals, minutes of state board meetings and other media was conducted in an effort to reveal the extent of these scope expansion efforts.

**Discussion:** A number of states/countries including: New York, California, Arizona, New Mexico, Colorado, Washington, Georgia and the United Kingdom have attempted and/or been successful in expanding their scope. This review will discuss what those efforts entailed and to what extent they were successful or failed.

**Conclusion:** There is an active and organized effort throughout the profession to expand the chiropractic scope of practice

## A Look at the Science of Chiropractic

Claude Lessard, DC

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Chiropractic is a philosophy, a science and an art. Those three components are ubiquitous in present debates on policy within the profession and in chiropractic colleges. As new information is made available to chiropractors, it is clear that the art portion of chiropractic has evolved over the past decades in terms of analysis and adjusting procedures. It is also clear that the philosophy has also evolved from being therapeutic (getting sick people well) toward non-therapeutic (location, analysis and correction of vertebral subluxation regardless of the outcome), even though it is embraced by only a small segment within the profession. The third component of Chiropractic, science, is less well defined. This paper defines and discusses this important third aspect of Chiropractic and its impact on the profession as a whole.

Chiropractic science is a term with positive connotations, important for example in developing the scope of practice from state to state. The term generally corresponds to anatomy and physiology in accredited chiropractic colleges but also includes chemistry and physics to a certain extent and "mathematical change measurements" as well as research. In chiropractic discourse these distinctions are regularly overlooked. The profession's neglect of the differences corresponds to a trend in chiropractic studies. Within present historical, philosophical, sociological, economic, etc. studies of chiropractic there is a strong tendency to play down the difference between basic and applied sciences, or between science and technology, or explicitly to reject it as relevant to the politics or governance of chiropractic. According to Seton Hall University's Department of Science and Technology Center, it is precisely "Basic Science that is concerned with the process of discovery. Basic scientists seek to discover new knowledge and information without the primary concern of how the principles they create might be used. Applied Science takes information that already exists and utilizes it for the solution of an existing problem. All scientific disciplines (physics, chemistry, biology, psychology, etc.) have basic and applied aspects. Basis science is more basic in the sense that without discovery of PRINCIPLES (emphasis mine) there is nothing to apply. Applied science relies on and could not exist without basic science."

This presentation argues that the 33 PRINCIPLES of chiropractic were discovered by chiropractors and are in fact, the solid foundational platform of chiropractic's basic science. It also argues that those principles are absolutes and that if chiropractors were to study each one in depth they would come to the realization that they are the authority on which chiropractic is based and that they can be trusted to be a firm guide to the practice of chiropractic. This would improve the chances of developing a chiropractic profession to serve society as a whole, not only the special interests of certain groups, and perhaps could be ground for union amongst chiropractors themselves.

## Historical Misconceptions: Who Really Convinced a Jury that the Chiropractic Vertebral Subluxation is Distinct from the Osteopathic Spinal Lesion

John B. Wolfe Jr., DC, JD

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**Introduction:** Leading contemporary scholars of chiropractic history have identified the famous 1907 LaCrosse, Wisconsin trial of Shegetaro Morikubo, D.C., found not guilty of the charge of practicing osteopathy without a license, as the event from which chiropractic philosophy was born. Those scholars relied substantially on an earlier account (1950, popularly known as the “Lerner Report”) of the event by attorney Cyrus Lerner. Lerner credits attorney Tom Morris with planning the winning trial strategy (including, especially, emphasizing the philosophical differences between the two sciences) that became the blueprint for defending chiropractors against charges of unlicensed practice for the next twenty years. Newly uncovered evidence suggests that more credit for the strategy should go to B. J. Palmer and Shegetaro Morikubo.

**Methods:** The author conducted many months of historical research into the life of Shegetaro Morikubo, in preparation for an article detailing Morikubo’s life in the United States. That article is accepted for publication in the journal *Chiropractic History*, currently in press. It was while researching Morikubo’s life, and reading contemporaneous accounts of the trial in the newspapers of the day, that the author, himself a trial lawyer, discovered evidence suggesting that B. J. and Morikubo planned the strategy, tactics and evidence many months in advance.

**Discussion:** Previously unknown is that Morikubo received a correspondence diploma in osteopathy, advertised and practiced as such in Minnesota, and was persecuted by licensed osteopaths. This may be what drove him to the PSC in early 1906.

While Morikubo was still a student, there is much to suggest that he and B.J. were already developing a plan to secure ownership of the vertebral subluxation while simultaneously getting revenge against the osteopath who was leading the persecution of Wisconsin’s chiropractors, and receiving national adulation from the osteopathic profession for doing so.

One example is the series of letters sent to the osteopathic schools of the day, asking whether any of them taught chiropractic. Each, of course, responded that they did not. These letters were to have been admitted into evidence to show that chiropractic and osteopathy were distinct.

**Conclusion:** Previous scholars of chiropractic history have relied too heavily on the work of Cyrus Lerner in determining who should be credited with the strategy that proved that chiropractic was separate and distinct from osteopathy and medicine. Much new evidence points to B.J. Palmer and Shegetaro Morikubo as the masterminds.

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## The Network Spinal Wave as a Central Pattern Generator

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**Abstract/Discussion:** A unique spinal wave has been observed as an emergent property associated with Network Spinal Analysis care (Network care). Network care originally developed in part from the subluxation models of B.J. Palmer, especially his concept of multiple cord pressures elaborated upon by Stephenson, Drain, and Palmer and expanded upon using models such as Breig's paradigm of Adverse Mechanical Cord Tension. The research demonstrates that the spinal cord tension may be self regulated into a dynamic wave in the spine. This wave has been studied since 1997 as an electromagnetic and mechanical phenomenon running along the spine at three distinct levels of care. The wave has the mathematical properties of a central pattern generator (CPG). The spinal wave may be the first CPG discovered in the spine unrelated to locomotion. The wave also relates to partial recovery from spinal cord injury and also Reorganizational Healing. A history of the research and a context for the wave's emergence are described.

**Conclusion:** We propose this research points to an endogenous reorganizational system, which exists on the edge between stress and relaxation within the body and is directly associated with the spinal sub-systems. This also suggests a dynamic way for the body to self-regulate and thus "maintain" a more coherent spinal and neural integrity, and adaptable subluxation-free state.

## INTRODUCTION

A philosophical discussion of the following antithetical perspectives:

1. The current view in the US medical culture is: The human body is vulnerable and life is frail so: "Thank God! we have modern medicine and hospitals to protect us and save us". This seems to be the current dominant belief system that supports the Insurance industry's hold on our money and our education.
2. The Chiropractic view in the alternative health care model is: The human body is amazingly resilient in its adaptation to *all stresses* and the fact that it works so well needs to be further understood and capitalized upon. There is an emerging wellness paradigm that is more about lifestyle than the correction of subluxation. Chiropractic shows that before symptoms emerge, location, analysis and correction of OAA subluxation has lasting results demonstrating the vitality of the body.

## METHODS

- ❖ 30 years of study and observation of Chiropractic as developed in *Volume 18 Subluxation Specific, Adjustment Specific by BJ Palmer.*<sup>i</sup>
- ❖ 26 years of clinical practice as a straight chiropractor, minimizing adjustments through practicing with pattern work, radiograph analysis of the OAA and correcting SPECIFIC subluxation through torqued toggle recoil adjustment.
- ❖ This model is documented in a population study presented at the 2010 IRAPS: "Hole in One in the 21 Century".<sup>ii</sup>
- ❖ A case study showing how HIO Chiropractic combined with crainiosacral therapy and crainio orthodontia helped resolve crainiosynostosis and scoliosis following a young boy from age 4 to age 10.<sup>iii</sup>
- ❖ A case study showing how trigeminalgia retraced and showed as a cause the early childhood tonsillectomy in a 40 year old woman.<sup>iv</sup>
- ❖ A paper describing Structural Hygiene for the Developing Human®. (SHDH) as a chiropractic model that determines sequencing of care with the OAA adjustment as a primary intervention and crainiosacral as a secondary intervention to re establish order in the central nervous system and all the fluids.<sup>v</sup>



## DISCUSSION

Since the 2010 population study, (HIO in the 21st Century) , Essential Chiropractic has recorded 100 out of 1900 new cases demonstrating that in the initial year of care with 7 to 10 visits and 1 adjustment, the patient returns to a normal postural midline. The result often leads to referrals bringing in friends, family and coworkers. The remaining 1800 cases in the initial year of care averaged 7 to 10 with 1 to 3 adjustments before returning to a normal postural midline. These numbers need to be measured and tested empirically and it will be interesting and exciting if the anecdotal tally by the observer leads to viable conclusions.

## CONCLUSION

This practice model demonstrates that health prevails and the education that the patients receive via office visits help them reframe their view of resiliency vs. frailty. These findings are considered anecdotal, albeit substantial. More chiropractors would have to be properly educated and choose to practice this way for better evidence to be collected and conclusively substantiated.

Therefore accrediting of chiropractic schools must focus on location analysis and correction of subluxation, rather than diagnosis and treatment of disease, which is more the realm of medical science and not that of chiropractic. A true health practice as designated by Structural Hygiene for the

Developing Human®

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<sup>i</sup> Vol 18 Subluxation Specific, Adjustment Specific, 1937 BJ Palmer DC, PhC

<sup>ii</sup> JVSR IRAPS Proceedings 2010 "Hole in One in the Twenty First Century"

<sup>iii</sup> An Interdisciplinary Approach to Juvenile Idiopathic Scoliosis, Crainiosynostosis, and Chiari 1 Malformation. Journal of Pediatric, Maternal & Family Health Vol. 2012 issues 1 -4

<sup>iv</sup> JVSR Proceedings of IRAPS 3013 Retracing A Bridge to Healing.

<sup>v</sup> JVSR Proceedings of IRAPS 2014 Structural Hygiene for the Developing Human, A practice model.

## The Effects of the Sacro Occipital Technique on the Quality of Life in Lung Cancer Patients Undergoing Chemotherapy and Radiation Treatment

Marilyn Holbeck DC, Alison Tomson MS, Charles L. Blum DC, Robert Monk DC

**Introduction:** Gastrointestinal (GI) secondary effects from chemotherapy are a common occurrence for patients receiving oncological care<sup>1, 2</sup>. This study notes clinical improvements in GI disturbances secondary to chemotherapy and radiation treatment through the application of Sacro-Occipital Technique (SOT), incorporating novel chiropractic diagnostic, analysis and treatment methods.

**Case Report/Assessment:** The patient was a 57-year-old female patient, diagnosed January 2004 with lung cancer, had tumor removal February 2004, began chemotherapy following surgery, and began radiation therapy July 2004. Her GI disturbances started February 2004 and her oncologist had prepared her for that likelihood<sup>3</sup>. The patient was a chiropractic patient since 2000, treated for recurrent low back pain and never reported any GI disturbances prior to February 2004.

**Treatment Intervention:** Chiropractic care focused to the subluxated thoracic vertebrae, guided by reflexes relating to GI viscerosomatic innervations. The chiropractic adjustive procedures were preceded by occipital fiber reflex techniques<sup>4</sup> and were followed by reflex somatovisceral contacts related to the stomach, lungs, and diaphragm<sup>5,6</sup>. The nutritional supplements utilized were eicosapentaenoic acid, pepsin, pancreatic enzymes, bile, and liver concentrates.

**Results:** The patient noted that with the SOT chiropractic care her digestive disturbances were significantly lessened and occasionally completely alleviated while concurrently receiving chemotherapy and radiation therapy.

**Discussion:** SOT incorporates analysis and treatment of viscerosomatic and somatovisceral reflexes<sup>7,8</sup> and referred pain patterns called Chiropractic Manipulative Reflex Technique (CMRT)<sup>9</sup>. In this case CMRT was administered to a patient during treatment for lung cancer to help alleviate GI side effects secondary to chemotherapy and radiation therapy. CMRT can be used to help treat visceral mimicry syndromes<sup>10</sup> or dysafferentation<sup>11</sup> at the spinal joint complex, associated with vertebral visceral syndromes.

**Conclusion:** SOT and CMRT along with nutritional supplementation might offer relief for patients who experience adverse digestive side effects during cancer treatment. The gentle low-force nature of this care warrants greater research due to the low risk and potential benefits.

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# Chiropractic Manipulative Reflex Technique (CMRT) Treatment for Gastroesophageal Reflux Disease (GERD) of a 3 Year Old Male Child: A Case Report

Robert D. Klingensmith DC, Charles L. Blum DC

**Introduction:** Approximately 4 million babies born in the U.S. each year, up to 35% with reflux in the first few months of life, which may resolve by their first birthday yet some will never outgrow the condition. Beyond infancy, up to one fourth of children and adolescents have recurrent abdominal pain, whereas only 5% report heartburn or epigastric pain<sup>1</sup>. Surgical treatment (fundoplication) has mortality rates up to 4.7% with 6% having postoperative complications<sup>2</sup>. This single case study involving a 3-year-old male being treated medically for GERD with various antacids (Prilosec) since the age of 2-months and Prilosec since the age of 24-months.

**Methods:** The patient received 5 treatments, the second 24-hours after the first and 3 others at 72-hour intervals. Treatment consisted of utilizing the CMRT protocol for occipital fiber #3 on line 2 (T5) was involved, the T5 subluxation was adjusted, and the stomach reflex manipulated. The mother was asked to not change any aspect of his normal eating routine for the first 4-5 days to determine what effect could be observed. CMRT protocol for occiput fiber #6 (T8), the T8 subluxation was adjusted, and liver reflex and pump was manipulated on the 4th treatment at which time the patient was instructed to drink at least 36-48 ounces of water within 6-8 hours but not within 3-hours of bedtime.

**Results:** The mother reported on the second visit that the patient has slept well, which was an improvement since almost every night prior to treatment he had been waking with reflux pain. After the third visit the mother reported that he did not wake complaining of his “belly aching,” which he had since he could talk. The fifth visit was two weeks after the initial treatment and the mother reported no reflux pain and that she had discontinued the Prilosec after the second treatment. Follow-up contact 12-months later upon a return visit found the patient doing well without reflux pain or symptoms nor taking any medications.

**Discussion:** Conservative care for pediatric GERD includes feeding modifications such as “a protein-hydrolysate formula thickened with one tablespoon of dry rice cereal per ounce, at restricted volumes. Positioning changes included avoidance of seated and supine positions. Elimination of all tobacco smoke exposure was advised<sup>3</sup>.” GERD is a lifelong disease that may require aggressive therapy early in life to reduce the risk of long-term sequelae<sup>2</sup>.

While sacro occipital technique’s (SOT) CMRT has methods of treating GERD<sup>4</sup> other chiropractic methods may also offer options for pediatric patients with this condition<sup>5</sup>. In a study (n=10) on adult patients with GERD referred by a gastroenterologist for chiropractic cotreatment endoscopy examinations performed after 8 sessions of CMRT chiropractic treatment, which included adjusting the T5 subluxation and reflex therapies for gastric syndrome, they found significant global reduction of GERD symptoms<sup>4</sup>.

**In pediatric study (1-year-old female) that utilized CMRT for the treatment of esophageal reflux, hiatal hernia, difficulty sleeping, vomiting, irritability, and inability to eat solid food.** After the first 3-4 visits the patient’s symptoms began to subside, she did not cry in pain as often, her reflux and vomiting reduced dramatically, she no longer needed to take the prescribed medications and she was able to sleep through the night and did not wake up crying in pain. After 4-weeks of care, the patient started crawling for the first time in her life and a couple months later began eating solid foods with any nausea<sup>6</sup>.

**Conclusions:** The findings from this study suggest that a subset of pediatric patients with GERD may benefit from this care a short period of trial chiropractic therapy which may function as a diagnostic test and a viable option to GERD that is unremitting in a young child. Chiropractic care (CMRT), which offers a low risk option, gives parents an alternative to more risky option of watching and waiting, various medications, and surgical interventions such as fundoplication. Further research is needed to determine which subset of children with GERD would be best served with chiropractic care.

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## Sacro Occipital Technique: Palpating Occipital Fibers on Animals – A Pilot Study

Jean E. Thompson DC, Heidi Bockhold DC, Charles L. Blum DC

**Introduction:** Sacro occipital technique (SOT) has developed various pre- and post- treatment assessment tools.<sup>1</sup> One assessment tool developed by the technique's developer, Major Bertrand DeJarnette, is called occipital fiber analysis and treatment (OFT)<sup>2</sup>. This SOT assessment tool is used to analyze and treat thoracic, lumbar, and sacral segments. The rationale for using OFT is to find regions of the body that have interrelationships through direct musculoskeletal and/or indirect reflex to the occipital region, spinal segments, and possibly to visceral referred pain pathways. According to SOT protocols, visceral referred pain pathways, both viscerosomatic and somatovisceral, are assessed with OFT to help determine which vertebral level should receive chiropractic manipulative reflex technique (CMRT).<sup>3,4</sup>

Treatment involves location and analysis of a vertebra subluxation in a reflex arc by way of occipital fiber muscular palpation, similar to trigger point analysis or Dvorak and Dvorak's spondylogenic reflex syndromes.<sup>5</sup> Once specific vertebra subluxation reflex arcs are located, corroborated with referred pain pathways, and clinical symptomatology, then the specific vertebra to be treated is isolated by pain provocation, muscle tension, and vasomotor symptomatology. Often times if a vertebral subluxation is chronic or unresponsive to chiropractic spinal manipulation then a viscerosomatic or somatovisceral component is evaluated.<sup>6</sup>

While CMRT protocols need more reliability and validity study, the palpation for pain in humans does help its reliability since palpation for pain alone has been shown to have reliability. With animals, veterinarians and their owners purport that each species has cues to inform the practitioner whether a region or location of palpation is uncomfortable or not. The phenomena of interpreting when an animal is in pain or when a region touched is sensitive, warrants further study<sup>7,8</sup>. Whereas with humans, a patient clinical history guides one to a diagnosis, with animals this is dependent upon the veterinarian or owner. Laboratory tests can be used to further help hone in on where treatment needs to be focused.

CMRT is developing an evidence base of literature for the treatment of humans<sup>9-35</sup> and recently also for animals (canines and equines).<sup>36-39</sup>. The palpation of occipital fibers is in CMRT, as an assessment tool to rule out residual subclinical findings, even as symptoms improve. As OFT has not been studied previously in quadrupeds, it is unclear if the occipital fibers are based only on bipedal spinal righting reflexes.

In bipedal humans the rationale for OFT rests upon visual and vestibular righting mechanisms, which occur as a method of accommodation to keep the head upright and parallel to the horizon.<sup>40,41</sup> Of interest is whether these reflexes could be found in quadrupeds and if these reflexes are similar to what has been found clinically in bipeds.<sup>42,43</sup> There does seem to be some similarity between upper cervical joint positions in bipeds and quadrupeds since, when at rest both, bipeds and quadrupeds hold the atlanto-occipital articulation and the upper cervical joints (C1/C2, C2/C3) in a flexed attitude."<sup>44</sup>

The purpose of this pilot study was to determine if experienced SOT doctors could palpate occipital fibers on canines and if it could be determined that certain fibers were more prominent on one side or the other.

**Methods and Intervention:** With cooperation from the canine's owner, who consented and was present during this study, three canine subjects were included in this study. The canines were in no distress and their body language suggested they enjoyed the experience of having the back of their heads gently palpated. Each canine was palpated by 11 experienced SOT doctors that had no knowledge of each dog. The doctor would palpate subject one, two, and three without anyone else in the room, except for the canine's owner and the doctor gathering data. During the canine palpation and data collection there was no discussion, so as not to influence the testing doctor's findings. The doctors in the study were asked to not discuss the study or what they found during palpation with anyone, while the test was underway.

Following palpation of a canine subject, the doctor was asked to complete a survey [Sample Survey Form] that asked the following questions:

1. Could you palpate occipital fibers on this animal?
2. How many occipital fibers were you able to palpate on each side of the canine's suboccipital region?
3. Of the fibers you may have palpated which one(s) were most prominent and on which side?

**Results:** The years of experience as chiropractors practicing SOT varied from the most at 59 years to the least at 14 years, an average total of 28 years. All doctors in this study reported that they could palpate occipital fibers on the three canines, however the number of fibers palpated was inconsistent, with the number 7 being the most common finding [6 of 11 doctors]. There was apparent confusion about whether the "# of Fibers Palpated" related to "total" number of fibers palpated on a side or the number of "active fibers palpated. This was particularly apparent with those doctors who noted "3" fibers palpated and then also noted "3" prominent fibers. There was no clear consensus regarding how many active occipital fibers were palpable and which side or fiber was most prominent. [See table 1.]

Doctor	Years of SOT Experience	Canine #1		
		# Fibers Palpated	Side of Prominence	Prominent Fibers
1	30+	6	Left	3L,6L
2	25	1	Left	7L
3	30	7	Both	2B,6B
4	25+	7	Both	2R,5B
5	16	5	None	None
6	19	3	Left	1L,4L,5L
7	59	7	Left	6L
8	25	3	Right	4-6R
9	14	7	Left	7L,1R
10	25	7	Left	5L
11	33	7	Both	6B

**Table 1. Data: OFT Canine Palpation Study (R=Right, L=Left, B=Both)**

Doctor	Years of SOT Experience	Canine #2		
		# Fibers Palpated	Side of Prominence	Prominent Fibers
1	30+	6	Right	3,4,5
2	25	3	Both	2,L,6L,2R
3	30	7	Both	2r,3L,4L
4	25+	7	Right	6,4,3,2
5	16	5	Right	4R
6	19	4	Left	2-5L
7	59	7	Both	2R,4L
8	25	4	Both	4-5R,5-6L
9	14	7	Both	6-7R,2L
10	25	7	Left	4L
11	33	7	Left	6L

Doctor	Years of SOT Experience	Canine #3		
		# Fibers Palpated	Side of Prominence	Prominent Fibers
1	33	7	Left	3L
2	25	1	Right	4R
3	30	3	Both	3R,7B
4	28	7	Right	4R,2R
5	16	3	Left	2L
6	19	3	Both	2R,3B,6B
7	59	7	Right	5R
8	25	6	Both	3-6R,4-5L
9	14	7	Both	4R,3L
10	25	7	Right	6R
11	33	7	Both	5B

**Discussion:** It appears from this study that occipital fibers can be palpated on a canine. However there was not much consistency on how many fibers each doctor could palpate on each side or which side or fiber was most prominent. The doctors in the study did note that the question regarding how many fibers were palpated may have been confusing. This could be rectified in a future study if the question being asked is whether the question was asking for “total” fibers or “active” fibers.

Future studies may be more productive if doctors in the study have greater experience palpating occipital fibers in canines. This may be particularly important since none of the doctors in this study had previously attempted to palpate occipital fibers on a canine. Also it possible that the palpation of a canine’s suboccipital myofascial region may change after palpation from doctor to doctor thus having a static occipital fiber condition may not be a reasonable expectation. Even though occipital fibers have been studied in humans<sup>45-47</sup>,

most of the research is in the preliminary stages. Therefore interexaminer reliability of occipital fiber palpation in humans (as well as in animals) will need further study.

**Conclusion:** This study is the first attempt to demonstrate palpable occipital fibers on a canine. While all doctors in the study determined they could palpate occipital fibers in all three canine subjects, it is unclear if the doctors had a preconceived expectation that occipital fibers would be present. Future study is needed to better address the questions asked as well as determine how to gain clearer data. Since there have been no other studies to date published on the palpation of OFT in animals, this pilot study was an important first step.

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## Review of Cases using SOT/CMRT on Equine and Canine

Jean E. Thompson DC, Heidi Bockhold DC, Charles L. Blum DC

**Introduction:** Integrative Health Care Modalities for animals has been on a steep rise in the last decade. Although the utilization of basic chiropractic methods of analysis and treatment are somewhat standard<sup>1</sup>, the methods of analysis and treatment using specific, recognized chiropractic techniques such as sacro occipital technique (SOT) is still in the formative stages.

In all case reports we utilized a chiropractic technique called occipital fiber analysis and treatment (OFT)<sup>2</sup>, which is a method within SOT used to analyze and treat thoracic, lumbar, and sacral segments. The rationale for using OFT is to find regions of the body that have some interrelationships through direct musculoskeletal, and indirect reflex, to the occipital region, spine, and possibly to visceral referred pain pathways. Visceral referred pain pathways, both viscerosomatic and somatovisceral, in SOT utilize OFT to determine which vertebral subluxation level should receive chiropractic manipulative reflex technique (CMRT) to treat viscerosomatic and somatovisceral related imbalance. This review of four cases illustrates a possible relationship between the utilization of SOT evaluation and treatment on animals, specifically equine and canine and their outcome to this novel intervention.

1. AB, a 12 year old Dutch Warm Blood (equine) began having shortness of breathe during work as a level 3 Dressage competitor. She was diagnosed with a sinus infection and treated multiple times with a variety of antibiotics limited to only short periods of relief. She could not perform due to her condition. Occipital Fiber analysis and treatment was performed while the horse was standing for analysis. Occipital Fiber 2, line 2, was found and corresponded to a tender T3 nodule (Respiratory Syndrome). The T3 subluxation was adjusted and CMRT was performed after neutralization of the occipital fiber. The CMRT included lung massage, intercostal massage and a diaphragm release. Following the occipital analysis and treatment procedure the horse took a deep breathe of air and began to relax. The occipital fiber was no longer swollen and boggy. The maxilla and frontal bones remained tender which were evident upon palpation. Twenty-four hours post treatment the owner was quite upset reporting that AB's symptoms were much worse. She was depressed, refused food, was very restless, and stood and threw her head up and down violently. At approximately 30 hours post treatment the horse threw her head one more time and a large amount of dark thick mucus came out of her mouth and nose. Again AB was able to take a deep breathe of air. She also walked over to her hay and began eating (which she had not been doing). For the next 12 hours she continued to drain from her nose as well as cough up thick mucus. AB showed so much improvement that the owner decided to turn her loose in the pasture. She bucked and galloped off. (Something she had not done for 2 months.) 5 days post treatment the horse was put back into work. 60 days after the first treatment the OF and indicators came back. The above procedures were repeated. AB continues to do well, she has returned to full work and competition<sup>3</sup>.

2. Rio, a 10-year old gelding quarter horse with known symptoms of anxiety and stress induced behavior changes (described by the owner as the appearance of "worry and/or unhappiness") presented for chiropractic care. Occipital Fiber analysis and treatment was performed. Occipital Fiber 6, line 2, was found and corresponded to a tender L4 nodule (Colon Syndrome). A Doctor of Veterinary Medicine auscultated the horses bowel sounds (borborygmi) pre-treatment and they were found to be a +1 in the right upper and lower abdominal quadrants and a +2 in the left upper and lower quadrants (+4 is normal). The L4 subluxation was adjusted and CMRT was performed after neutralization of the occipital fiber. The CMRT included colon massage, done on the sides and slightly under the horse of all four quadrants. Post treatment, the occipital fiber was no longer swollen or boggy. The horse was very relaxed, calm, and more tolerant during the post exam. Bowel sounds were now more progressively motile. All abdominal quadrants had increased by 3 and 4 fold<sup>4</sup>.

3. Kola, a 10 year-old female cattle canine with known chronic symptoms (past 2-3 years) of bloating (canine gastric dilatation-volvulus), mood changes, joint pain, and psoas tension presented for SOT evaluation. Her prior interventions of chiropractic, acupuncture, diet modifications and medication were not successful in alleviating her symptoms. Occipital Fiber analysis and treatment was performed. Occipital Fiber 5, line 2, was found and corresponded to an L3 nodule (Glandular Syndrome). The L3 subluxation was adjusted and CMRT was performed after neutralization of the fiber. Post-treatment the fiber was no longer swollen or boggy. The canine was very relaxed, there was decreased joint tenderness, and the psoas tension was notably less. During the days the followed, the canine was noted to have much less bloating. Also, the canine's mood had changed and behavior was more calm and consistent<sup>5</sup>.

4. Barnaby, a 12-year-old neutered male German Shepard mix with daily fecal incontinence presented for SOT evaluation. The dog was unresponsive to acupuncture, laser therapy, ultrasound, physical therapy, and traditional chiropractic adjustments. Occipital fiber analysis and treatment was performed. Occipital Fiber 7, line 2, was found and corresponded to an L5 nodule (Colon/Prostate Syndrome). The L5 subluxation was adjusted and CMRT was performed after neutralization of the occipital fiber. CMRT consisted of Colon Massage in the direction of sigmoid colon, descending, transverse, and ascending colon. The Ileocecal Valve was also balanced using SOT procedure. Following the occipital analysis and treatment procedure the occipital fiber was no longer swollen or boggy. During the days that followed the treatment the dog's fecal incontinence was reduced to 8 times in 20 days. After 3 weeks, the dog was re-evaluated. Occipital Fiber 6, line 2 was found and corresponded to the L4 nodule. L4 was adjusted and the same CMRT was performed after neutralization of the occipital fiber. During the days that followed the treatment the dog's fecal incontinence was reduced to 2 times a month for the next 3 months. Prior to this treatment the dog would not have any sustained relief from any other modality, including traditional chiropractic care<sup>6</sup>.



**Methods and Intervention:** Equines and canines purportedly have seven occipital fibers just as humans do<sup>7</sup>. We have not found them to have any more or less. We had to take this into consideration due to the difference in spinal anatomy. Humans, canines, and equines all have 7 cervical vertebrae. Canines have 13 thoracic and 7 lumbar vertebrae and equines have 18 thoracic and 6 lumbar vertebrae. For our case studies we followed the human OFT chart but also checked one segment above and below for the animals. Utilizing OFT on canines and equines requires that we have an animal handler present. The canines were analyzed in a standing position with the head held in a slightly flexed position (for best access to the occipital fibers). The CMRT was done in a lateral recumbent position. Both of these require an extra person. Equines were analyzed and treated in a standing position only with the head slightly flexed. This required a handler to hold the animal still. In one case study a second doctor was needed to hold the contact point since the body of the horse was too long for one person to reach.

**Results:** Following the occipital analysis and treatment procedure, each animal had a decrease in symptoms. In each case, the occipital fiber was no longer swollen or boggy. Case one<sup>3</sup> showed a horse that was about to be given up on. Horses are often euthanized when unable to function and heal. This horse was put back to work as a dressage competitor, let alone able to eat and breath properly again after OFT. Case two<sup>4</sup> showed a distressed horse with bowel function significantly decreased. After OFT, bowel sounds were increased 3-4 fold, a significant increase in function. Case three<sup>5</sup> showed a canine with a chronic symptom that had no other relief, including traditional veterinary medicine, except after OFT. Finally, case four<sup>6</sup> showed a canine with daily fecal incontinence with many failed prior interventions. The incontinence went from daily to 2 times a month with only two treatments of OFT.

**Discussion:** In bipedal humans the rationale for OFT rests upon visual and vestibular righting mechanisms, which occur as a method of accommodation to keep the head upright and parallel to the horizon<sup>8</sup>. Of interest is whether these reflexes could be found in quadrupeds and if these reflexes were similar to what has been found clinically in bipeds. Of further interest is whether OFT and CMRT would prove beneficial in animals. It did appear from each case that there is a positive correlation between OFT and CMRT typically applied to humans when applied to animals in these studies.

**Conclusion:** Since there have been no other studies to date published on the use of OFT in animals, this case series is an important first step, and it may encourage others to undertake clinical trials to test the effectiveness of OFT. Based on the diagnostic tools and owner's interpretation of the animal's response before and after treatment there was reason to believe that some positive change had occurred. Due to these findings it is reasonable to assume that further investigation into the use of OFT and CMRT for equines and possibly other animals is warranted.

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## Chiropractic Terminology

Jack K VanDervort DC, DPhCS

“Our Masterpiece”  
BJ Palmer- 1961

### FOREWORD

My father, B. J. Palmer, put together the manuscript of this volume over a relatively short period of time—actually not more than a year. Most of it was written or assembled during the early morning hours of 5 to 8 a.m. during the last year or two of his life at his home in Sarasota-. David Palmer

### THE NATURAL LAW

“MAN IS THE LIVING expression of the epitome of natural and normal law.”

### OUR MASTERPIECE (1961) 2014

“SEEING CHIROPRACTIC”

A MODERN ILLUMINATION

“EXPRESSING” the “FORCE” of Chiropractic THROUGH the “MATTER” of art.

Chiropractic Principles:

8-The function of INTELLIGENCE is to create force.

10-The function of FORCE is to unite intelligence with matter

13-The function of MATTER is to express force.

### A CONSIDERATION:

Chiropractic philosophy and the beaux arts, (particularly the “Expressionist painters”) share some basic concepts that are elemental to the conveyance of their mission. Intelligence, Force & Matter represent keystone elements of their evolution to communicate their individual expressive art. Two goals inherent to both chiropractic and of art are “Expression & Tone,” both of these concepts represent the practitioner’s aim to facilitate the manifestation of life into its best light and vibrancy. The chiropractor’s medium is the human body and the artist’s is a range of inert mediums, from canvas to clay.

Artists inflict an educated force into inorganic mediums looking for expression. Chiropractors facilitate clear force of intelligence within organic matter seeking to clear innate expression.

The theoretical elements and principles of chiropractic illustrated through these artistic masterpieces represent a visual communication. An attempt to embody and communicate the metaphysical concepts of chiropractic philosophy through the physical expression of art. A side by side study of shared concepts in communication of the beauty and vibrancy of life, thus illustrating the invisible things that move us.

Methodology in the Expressionistic Arts in seeking & revealing Expression:

#### ART

Deconstruct the composite of the human form and condition into the elements of its inherent expression, then revealing those innate elements of expression in a provocative way of inspiration and enlightenment.

#### CHIROPRACTIC

Dissect the metabolic flow of intelligence into and throughout the vertebrate body, seeking the cause and the force of its innate expression, and then facilitating the clarity of the force of that expression into optimal potential.

### CHIROPRACTIC EXPRESSIONS THROUGH ART

“Genius at work”

“Artistic Metaphors” - a salient interpretation of the principles of Chiropractic, in attempt to make them culturally provocative and increasingly understandable to a wider audience.

A List of artistic masterpieces, illuminating chiropractic's philosophical conceptions:  
-THE PAINTINGS -

"Our Masterpiece"  
BJ Palmer- 1961

#### FOREWORD

My father, B. J. Palmer, put together the manuscript of this volume over a relatively short period of time—actually not more than a year. Most of it was written or assembled during the early morning hours of 5 to 8 a.m. during the last year or two of his life at his home in Sarasota-. David Palmer

#### THE NATURAL LAW

"MAN IS THE LIVING expression of the epitome of natural and normal law."

#### PREQUEL:

A visual exercise, illustrating the advent of chiropractic and the significance of its contributions & benefits within the world of the healing arts, using the evolution & metaphors of the expressionist arts as a vehicle of illumination.

Cave Art: One dimensional beginning (powerful in its own right but one dimensional in expression.) [Medicine- Mysticism]

Egyptian Art: One dimensional evolution with more information [Medicine – Bloodletting]

Medieval Art: One dimensional evolution with color but still lacking the full orbed expression of the human experience. [Medicine –Reductionism/ Drugs]

Raphael- Concept of Dimension/Perspective in art – giving art a more robust portrayal - truer to the complete and vitalistic expression of life. [Chiropractic- DD Palmer's introduces the concept of a non physical intelligence and its communication within the living organism as a significant factor in healthcare giving healthcare a more fully orbed dimension, beyond the physical matter and functioning of life.]

#### JOSEPH AND THE ANGEL 1640 - George la Tour

(Illumination) –Speaks to The Original Chiropractic Question\1895

DD Palmer posed the original question of Chiropractic, "One question was always uppermost in my mind for my search for the cause of disease. I desired to know why one person was ailing and his associate, eating at the same table, working at the same shop, at the same bench, was not. WHY? What difference was there in the two persons that caused one to have catarrh, typhoid, or rheumatism, while his partner, similarly situated, escaped? WHY?"

[Pp.18 THE SCIENCE ART AND PHLOSOPHY OF CHIROPRACTIC, DD Palmer, 1910]

- 50 Year old DD Palmer brought the conceptual dimension of "Force" to the healing arts.

-Van Gogh & DD were contemporary's

The same intellectual illumination that Ruben brought to the art world in revealing a fuller way to express the depth of the human experience and mankind's interface with the world around them; DD Palmer rocked the medical world of the 1800's revealing a new intellectual perspective on healthcare, with a fuller and more complete comprehension of human expression "in and out of health".

#### STARRY NIGHT - Van Gogh/1889

(Van Gogh & DD were contemporary's)

In 1889, 36 year old Vincent Van Gogh painted Starry Night while in an Asylum at Saint-Remy illuminating an artistic concept of "Force" in the art world.

- In 1895, six years later, 50 Year old DD Palmer brought the conceptual dimension of "Force" to the healing arts through practical observation and philosophic rational.

**THE CREATION OF ADAM – Michelangelo/Sistine Chapel /1511-12**

No. 1. THE MAJOR PREMISE. A Universal Intelligence is in all matter and continually gives to it all its properties and actions, thus maintaining it in existence.

(Detail piece) /The Original Synapse

The space between...Beginning of Quantum Physics

We are not hard wired to our creative intelligence

This “metaphysical space” between intelligence and matter is what necessitated “Chiropractic Philosophy”

**ANCIENT OF DAYS - Blake/1794**

Tone “Founded on Tone” A perspective or measurement.

(The Chiropractic perspective in healthcare is “tone of expression”)

**A SUNDAY AFTERNOON ON THE ISLAND OF LA GRANDE JATTE - Seurat / 1884**

Intracellular Communication (Quantum Theory)

(Detail piece- Enlargement of dot painting style “chromoluminarism & pointillism”

Modeled after scientific theory of the time

**GIRL BEFORE A MIRROR – Picasso/ 1932 - (BJ- Vol.18/1934)**

Picasso born 1881 (Picasso & BJ were contemporary’s)

BJ Palmer born 1882- (Imagine if Van Gogh had Picasso for a son!)

Just as Picasso dissected art to find the underlying elements of true artistic expression

so did BJ Palmer dissect the expression of life into the “Triune of Life”

(We are the sum of our parts) Dissection of intelligent function.

**NUMBER 8 – Pollock/1949**

© No. 8. THE FUNCTION OF INTELLIGENCE.

-The function of intelligence is to create force

Pollock did not name the paintings but only gave them numbers because he did not want the viewer to see it without any preconceptions but rather discover the intelligence of it for themselves. The expressionists were constantly trying to deconstruct artistic expression into its purest elements. And then to give a provocative rendering to the tone of it .In this painting the intension is to reveal, in its barest form, the forces created of intelligence

**THE GREAT WAVE - Hokusai / 1829-32**

No. 10. THE FUNCTION OF FORCE.

-The function of force is to unite intelligence and matter.

This woodblock print illustrates the invisible universal intelligence of nature manifested in the force of a great wave crashing over a small boat...It is also a great depiction of how physical life (Matter) is directly united to and affected by the forces it floats upon. The force of intelligence depicted by the wave is enormous enough that it dwarfs Mt Fuji in the background.

**SOUP CAN – Warhol / 1962**

No. 13. THE FUNCTION OF MATTER.

-The function of matter is to express force.

Warhol took the most common objects of daily life and revealed the force of intelligence expressed through it. Again Intelligence, Force and Matter stripped down to their most basic elements and illustrated in a provocative format. The intelligent force within this shape, these colors express the ideation of SOUP!.. Pure genius.

**THE SCREAM – Munch/1893**

No. 29. INTERFERENCE WITH TRANSMISSION OF INNATE FORCES.

There can be interference with the transmission of Innate forces.

No. 30. THE CAUSES OF DIS-EASE.

Interference with the transmission of Innate forces causes incoordination or dis-ease.

No. 31. SUBLUXATIONS.

Interference with transmission in the body is always directly or indirectly due to subluxations in the spinal column.

The disastrous effects of the Chiropractic Vertebral Subluxation revealed through the silent scream of nature depicted in Munch’s work.

**VITRUVIAN MAN - Da Vinci /1490**

No. 7. THE AMOUNT OF INTELLIGENCE IN MATTER.

The amount of intelligence for any given amount of matter is 100%, and is always proportional to its requirements.

No. 22. THE AMOUNT OF INNATE INTELLIGENCE.

There is 100% of innate intelligence in every “living thing,” the requisite amount, proportional to its organization.

Proportion -A huge chiropractic concept in the cause of dis-ease. It is not” too much or too little” but rather a change in mental impulse expression? Chiropractic principles # 7 &22 are our first clues that proportion (too much or too little) neurology is not part of the cause of dis-ease.

Da Vinci believed the workings of the human body to be an analogy for the workings of the universe." The drawing is based on the correlations of ideal [human proportions](#) with geometry described by the ancient Roman architect [Vitruvius](#) in Book III of his treatise [De Architectura](#). Vitruvius described the human figure as being the principal source of proportion among the [Classical orders](#) of architecture.

#### **THE PROCESSION TO CALVARY - Brueghel /1564**

No. 32. THE PRINCIPLE OF COORDINATION.

Coordination is the principle of harmonious action of all the parts of an organism, in fulfilling their offices and purposes.

No. 33. THE LAW OF DEMAND AND SUPPLY.

The law of Demand and Supply is existent in the body in its ideal state; wherein the “clearing house,” is the brain, Innate the virtuous “banker,” brain cells “clerks,” and nerve cells “messengers.”

This painting is an excellent representation of co-ordination necessary to the harmonious flux and flow of life. Brueghel is well known for his multifaceted panoramas densely packed with figures engaged in various activities of early Dutch life. Here, he depicts the historical procession of Christ to Calvary set in a fifteenth century Flemish setting. The mercenaries, in their bright-red tunics, who were in the service of Philip II of Spain, the ruler of Brueghel’s Netherlands, carrying on the process of crucifixion, while the Flemish peasants respond to the rudeness of the day; all in a harmonious civil setting befitting the complexity of events.

#### **LUNCHEON OF BOATING PARTY - Renoir / 1881**

Portrayal of EASE & ADAPTABILITY- (The goal of chiropractic care)

– The painting depicts an idealized group of friends relaxing on a balcony at the [Maison Fournaise](#) along the [Seine](#) river in [Chatou](#), France. In reality in nineteenth century France this group of people would never be seen dining together due to social mores of the time. This painting shows that when intelligence flows freely and clearly throughout the expression of life there is unfettered ease and adaptability and healthy tone.

## The Chiropractic Adjustment: Roadwork for the Universe

Randy W. McCall DC, DPHCS

A different perspective of how we see our Chiropractic Mission and service that we provide to humanity Chiropractic Principles  
1-The major Premise, Universal Intelligence is in all matter and continually gives to it all its properties and actions, thus maintaining it in existence.

6-The Principle of Time. There is no process that does not require time.

15- No Motion without the Effort of Force. Matter can have no motion without the application of force by Intelligence.

24-The Limits of Adaptation. Innate Intelligence adapts forces and matter for the body as long as it can do so without breaking a universal law, or Innate Intelligence is limited by the Limitations of matter.

26-The comparison of Universal and Innate Forces. In order to carry on the the universal cycle of life, Universal forces are destructive, and Innate forces constructive, as regards structural matter.

28-The Conductors of Innate Forces. The forces of Innate operate through or over the nervous system.

31-Subluxations. Interference with the transmission in the body is always directly or indirectly due to Subluxations in the spinal column.

The Purpose of this dissertation:

To relate the practice of Chiropractic to something we experience every day on our commute to work or in our leisure time traveling. Many of the things involved have a similarity and may have a clarity that can be related to our missions as Chiropractors. Chiropractic Principles not only explain life but can be related to many of the various aspects of what we experience in life. By doing so we may come to understand the magic of Chiropractic better.

The Law of Attraction:

It's a fact that our bodies are made up of billions of tiny particles that are held together and organized by a force we call Innate Intelligence. These particles all communicate on a level that we don't completely understand. I surmise that their Vibration or (motion) and Resonance or (harmonious motion) or what is referred to by J.H. Craven DC, in Philosophy of Chiropractic, as coordination, is key in this process. We may not know the exact mechanism but based on what we know this plays a major role in the continued existence, growth and reproduction of all cells in the body. This process is all subject to Universal Forces, Innate Forces, Time and Limitations of Physical Matter. Vibration relates to the motion of each particle as it relates to the adjoining particles and their function as this relates to the harmony of the organism.

For example we know from a reductionist perspective this starts from sub-atomic particles, forming atomic particles, forming compounds, forming complex molecules, forming cells, forming tissues, forming organs, forming systems, forming the entire mass of the body. We know that this equals more than the sum of the parts. As Chiropractors we look at this from a vitalistic perspective. Perhaps this is what D.D. Palmer related to in describing Tone. I view Tone and Harmonious Resonance, as it relates to the overall health of the body to be very similar.

Principle No.28, states that, "The forces of Innate Intelligence operate through or over the nervous system." However given what we know about quantum mechanics, (Quantum Leap Thinking, by James J. Mapes), and energy fields (The Field, by Lynne McTaggart), as well as (The Biology of Belief, by Bruce Lipton), This process may have other ways to convey information.

For the purpose of this explanation we are using the Nervous System. We are viewing the Nervous System as a road way carrying information to all cells in the body. We are considering the roadway of the nervous system as being the pathway that must be maintained free of obstructions. As any roadway it is subject to natural forces, (air, rain, wind, and water) this would be External Invasive forces. In this case the Internal resistive forces would be the quality of construction, the material used for construction, the maintenance that is given to the roadway to fix and repair little problems before they become bigger problems. This is basically a mechanistic explanation to help us understand the bigger picture. If it were Vitalistic it would have something akin to Innate Intelligence that would continue to address the continuous effect of the invasive forces, I would guess we could use the Department of Transportation in our analogy.

The Subluxation of this pathway would be any crack or damage that would break down the physical stability to slow down or stop the traffic traveling on this road.

The repair of the road way could come from various equipment being used, for example, High impact forceful corrections from big heavy equipment. Such as industrial rollers and paving equipment, bulldozers, backhoes, all of which are very forceful and invasive tough machines. These machines are powerful and have a definite impact on the surface they work on. On the converse would be, many jobs that require a smaller version of equipment that would address a smaller crack or obstruction. These would be referred to as, Light force low impact equipment, things like hand tools, shovels, brooms, and rake's for some examples.

In Chiropractic some doctors use high impact corrections, and some use low impact corrections, some use both to address various spinal and structural misalignments, or Subluxations. They apply these techniques using their clinical judgment when the appropriate

technique and approach is necessary.

In construction some of the operators are very skillful in operating their respective equipment, they are very focused and precise in what they do and how they do it. They can perform their job in less time with greater precision, and the end result is a better repair and longer lasting effectiveness in resisting external forces that are working constantly to break down the road.

Some of the contractors may not be as interested in doing the best job, or may not be as skilled as the other operators. They operate their equipment with less precision, less focus, the job may look on the surface to be done well but due to the lack of precision and focus it will fall apart fast with the constant bombardment of external forces.

The difference between these two as I see it is Focus and Intent. I have long felt that a focused Chiropractic adjustment delivered with the proper intent will yield a better outcome for the patient. As I understand Quantum principles and things like Noetic Science, (A multidisciplinary field that brings objective scientific tools and techniques together with subjective inner knowing to study the full range of human experiences), and with some of the recent studies in Resonance, (A sound or vibration produced in one object that is caused by the sound or vibration produced in another), we may soon be able to prove this theory.

In our construction scenario there are always new disturbances in the roadway, and there are disturbances that have reoccurred time and time again due to many factors and external forces. Sometimes the damage is just starting and can be patched easily, I refer to this as Acute Subluxation, but sometimes they have been patched and patched in the same place over and over again, here I refer to this as a Chronic Subluxation.

This would be due to Limitations of Physical Matter. This would be where we continue to patch but most times the external forces are unrelenting and this becomes a permanent problem. However with or without the patch in most cases the traffic still passes on varying levels accordingly, although maybe not as efficiently as it used to.

Vehicles may have to slow down or take a different directions across this damaged pathway. Maybe the road is so rough that it shakes and damages the vehicle or the contents of the vehicle. This can be likened to the subluxation or obstruction changing the cargo being transported or carried in or on the vehicle. Here I liken this to the Mental Impulse being transported across the nerve fiber. Changing the Mental Impulse may change many things. Considering some of the cars are traveling for business, some for leisure, some are time sensitive and absolutely necessary to be on time for specific reasons. The point is they all have a specific destination and purpose, changing this has infinite possibilities.

We relate this to Acute Subluxations, and Chronic Subluxations. These may need to be addressed differently from a clinical perspective. Sometimes it's not a question of correcting and maintaining the structural blockage, as it may be a question of managing a chronic subluxation issue. Due to limitation of physical matter the breakdown may be so impaired that continuous attention may be needed to manage any degree of transmission as it relates to cars for our construction scenario or nerve conduction for our chiropractic scenario.

I feel this can relate some complicated principles to our patients so they can understand on a different level what Chiropractic brings to health care.

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## Resting Heart Rate as a Method for Analyzing the Subluxation's Neurological Component: A Commentary

John Hart DC, MHSc, ACP

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**Introduction:** A misaligned vertebra that is not accompanied by a neurological disturbance would not be vertebral subluxation from a chiropractic standpoint. Thus, it behooves the subluxation-centered chiropractor to use a valid and reliable test to see if the patient's nervous system is malfunctioning. Moreover, without an evidence-based test to assess the patient's nervous system, there would be doubt as to whether the patient's nervous system is functioning better following a spinal thrust. A successful spinal thrust, evidenced by improved nervous system function, and indicated by an evidence-based test for nervous system function, is properly called a *chiropractic adjustment*.

One potential option for monitoring nervous system function is the relatively simple procedure of resting heart (pulse) rate (PR). This presentation provides a rationale for use of PR in subluxation-centered chiropractic.

**Discussion:** PR is a good fit for subluxation-centered chiropractic because it (PR) is:

- 1) A neurological assessment, being controlled by centers in the medulla oblongata
- 2) Supported by outcomes research indicating that a lower PR is generally healthier than a higher PR
- 3) Supported by chiropractic research indicating that PR may decrease following chiropractic care
- 4) Easy to perform, and therefore feasible for use on all patient visits
- 5) Easy for doctor and patient to understand how its number is generated (beats per minute)
- 6) Easy for doctor and patient to interpret:
  - a. Increasing PR → neurological disturbance
  - b. Decreasing PR → neurological ease

**Conclusion:** It is important for the subluxation-centered chiropractor to use an evidence-based method for analyzing nervous system function. Without knowledge of how well the patient's nervous system is functioning, the subluxation-centered chiropractor can only guess as to whether the patient is subluxated and whether they are improving from a neurological standpoint. Resting pulse rate appears to be a good fit for monitoring nervous system function in subluxation-centered chiropractic practice.



## Resolution of Myasthenia Gravis Symptoms Following Upper Cervical Chiropractic: A Case Report

Philip R. Schalow BM, MM, AS, DC

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**Introduction:** Myasthenia gravis is a chronic autoimmune neuromuscular disease characterized by varying degrees of weakness of the skeletal muscles of the body. Crisis occurs when breathing is compromised. Normal medical intervention involves the use of medication; anticholinesterase agents, neostigmine and pyridostigmine; Immunosuppressive drugs; prednisone and methotrexate. Close monitoring is important as side effects of the medication are as overwhelming as the condition itself. This paper documents the effect of upper cervical chiropractic (NUCCA) on medically diagnosed Myasthenia Gravis.

**Methods (Case Presentation):** A 78 year old male presented with medically diagnosed with Myasthenia Gravis. Primary complaints included; frontal headaches, inability to breathe, difficulty in focusing eyes, and arm weakness especially lifting objects. An atlas subluxation complex was revealed through a chiropractic examination and following the established procedure by the National Upper Cervical Chiropractic Association (NUCCA) including an orthogonal radiographic analysis. Within three months of NUCCA care after atlas correction using a 'triceps pull', the patient's primary complaints improved significantly. Full resolution of presenting symptoms occurred after five years of NUCCA care.

**Discussion:** There are a very limited number of research articles describing effects of chiropractic care on the resolution of Myasthenia Gravis symptoms. Most obvious is the apparent lack of upper cervical chiropractic care in the literature. This report is critical in documenting the effect of upper cervical chiropractic care on resolution of Myasthenia Gravis. Myasthenia gravis is thought an autoimmune process where antibodies block cholinergic neurotransmission to skeletal muscles with poor prognosis.

**Conclusion:** The reduction and apparent elimination of the neurological/musculoskeletal symptoms in this patient demonstrate upper cervical care has a beneficial outcome in those with Myasthenia Gravis. Future research is warranted to address the physiologic mechanism underlying the reduction and elimination of neurological/musculoskeletal symptoms originally observed in this patient.

**Key Words:** Myasthenia Gravis, upper cervical chiropractic, National Upper Cervical Chiropractic Association (NUCCA)

## Changes in Quality of Life Assessments and MRI Measured Intracranial Compliance of Migraine Subjects Receiving a National Upper Cervical Chiropractic Association (NUCCA) Atlas Correction

H. Charles Woodfield, III, BS Pharmacy, DC, Werner Becker, MD, D. Gordon Hasick, DC, Sarah Rose, PhD, Clive Beggs, PhD

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### Abbreviations:

PC-MRI: Phase Contrast Magnetic Resonance Imaging

NUCCA: National Upper Cervical Chiropractic Association

ICCI: Intracranial Compliance Index

QOL: Quality of Life

mTBI: mild traumatic brain injury

Keywords: migraine headache, quality of life, magnetic resonance imaging, cerebrospinal fluid, venous

**Background:** Using PC-MRI imaging, craniospinal flow changes were measured before, then after subjects that received a National Upper Cervical Chiropractic Association (NUCCA) atlas vertebrae correction. Previous study revealed an increased intracranial compliance (ICCI) with decreased venous pulsatility, following an atlas correction procedure.

**Objective:** This observational case series monitored eleven neurologist diagnosed migraine subjects in determining the consistency and sustainability of previously observed changes.

**Methods:** After screening by a neurologist, potential subjects signed consent, completed baseline migraine-specific quality of life (QOL) measures, returning in 30-days with a completed headache diary. Determination of need for NUCCA care confirmed study inclusion, allowing subjects to obtain baseline PC-MRI measures. Using a 1.5-Tesla GE 360 Optima MRI scanner, MRI acquired flow data analyses were completed using the software MRICP version 1.4.35 (Alperin Noninvasive Diagnostics, Chicago, IL). Subjects received care following the NUCCA protocol for eight weeks. Follow-up PC-MRI occurred at week four and eight following the intervention. Adverse reactions were surveyed one week after intervention. Headache diaries were maintained throughout the study. Neurologist end-of-study exit interviews allowed for final QOL outcomes collection.

**Results:** Of eighteen initially screened candidates, eight females, and three males, average age 41 years, met inclusion criteria. Four subjects with substantial secondary paravertebral venous drainage, showed an increase in ICCI. Seven subjects exhibiting primary jugular outflow, show ICCI unchanged from baseline. All subjects reported a clinically relevant improvement in at least one or more QOL assessments. Ten subjects reported mild neck discomfort occurring 24 hours after intervention, not requiring medication or treatment.

**Conclusion:** QOL measures seemed to indicate resolution of many migraine symptoms. The literature reports Mild traumatic brain injury (mTBI) patients show a predominant secondary venous drainage when compared to normal controls. Subjects reporting a remote history of concussion demonstrated a secondary venous drainage. Perhaps this study's ICCI changes were influenced by concussion and aforementioned secondary venous outflow indicating further investigation. The significance of consistent or increase in ICCI following intervention observed in the secondary venous drainage cohort compared to the jugular cohort remains unknown.

# Improvement in Post-Concussion Symptoms in a 16-Year-Old Female Under Upper Cervical Chiropractic Care– A Case Report

Jonathan Chung DC

**Objective:** The purpose of this paper is to describe the recovery of a 16-year-old female patient with mild traumatic brain injury (mTBI) through correction of the atlas subluxation complex.

**ClinicalFeatures:** The patient is a 16-year-old female presenting with dizziness, headaches, neck pain, and brain fog following a fall off a horse. In the 3 months post-injury, she received treatment from an acupuncturist and vestibular therapist with no change in symptomatic outlook. She was also being managed by a neurologist who recommended vestibular rehabilitation and a brain MRI. Brain MRI showed periventricular white matter hyperintensities characteristic of an aging brain.

Prior to her visit, the patient was missing school 3 days/week and was unable to ride her horse for recreation or competition due to feeling off balance. She also reports the symptoms affecting her social life.

**Intervention:** The patient was evaluated through the NUCCA protocol and was found to have an Atlas Subluxation Complex. Post adjustment x-ray showed reduction in atlas laterality (50%) and atlas rotation (60%). The patient was seen 14 times in 6 weeks and required 6 adjustments.

The patient reported a 60% improvement in dizziness and concentration since beginning care. She also reported a 100% improvement in headaches and cervical pain. She also reported missing just 3 school days during the 6 weeks. The patient also began riding her horse again 3 weeks into care, and rode in a competition at 4 weeks.

**Discussion:** Chiropractors are amongst the most common health professionals seen after a traumatic head injury<sup>1</sup>. The literature supporting chiropractic's role in managing mTBI is limited concussion identification<sup>2</sup> and supporting return to play guidelines<sup>3</sup>. The role of subluxation correction and post-concussion syndrome is limited to 3 case reports<sup>4-6</sup>.

Flanagan proposed a biological rationale to explain the effects that upper cervical distortion from traumatic injury or congenital malformation may have on cerebral spinal venous insufficiency and chronic neurodegeneration<sup>7</sup>. A review of the literature has provided additional evidence showing mTBI may cause venous insufficiency<sup>8</sup>. It is this author's contention that head injury may serve as a model for the chronic neurodegenerative effects of the upper cervical subluxation.

**Conclusion:** This case demonstrates a situation in which correction of the atlas subluxation complex showed a proportional improvement in the patient's symptomatic outlook following a head injury. Research on the biological mechanisms related to Atlas Subluxation and mTBI are recommended, in addition to randomized clinically controlled trials.

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## The Effect of Pediatric Subluxation–Based Chiropractic Care on a Pediatric Patient Exhibiting Paroxysmal Tonic Uppgaze (PTU) and Congenital Torticollis: A Case Study

Charmaine A. Herman MA, DC

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**Introduction:** This case study describes the use of subluxation-based chiropractic care in the management of a 12-month-old male child with paroxysmal tonic upp gaze (PTU) syndrome, torticollis, and neurological issues due to birth trauma.

**Method:** The initial exam consisted of the following: light palpation of the neck, back, and pelvis; NUCCA evaluation of holding child and leaning body to the left and then to the right revealed right atlas laterality; with child on mother's chest, prone leg check revealed left short leg; finally, challenge of right atlas balanced short leg. Sustained hold on right atlas was used to correct atlas Subluxation and the Activator instrument was utilized on left pelvis and left shoulder along scapula and trapezius at each visit.

**Result:** The patient was seen for four months for a total of nine (9) visits. After first chiropractic correction parents noted that he fell asleep easier and Moro reflex greatly diminished. Care continued weekly for one month and parents reported PTU, but only when he was excited and no indication of shoulder sensitivity was observed. Symptoms reemerged after toe prick, but subsided after a chiropractic adjustment to remove vertebral subluxation.

**Discussion:** Paroxysmal tonic upp gaze deviation (PTU) is a rare neuro-ophthalmological disorder with onset in infancy or early childhood. Although PTU generally tends to disappear spontaneously within a few months or years, subsequent case reports have demonstrated the heterogeneous nature of the syndrome with respect to outcome.

Additionally, treatment for congenital muscular torticollis has consists of active home exercise, gentle manual stretching therapy, application of orthosis, botulinum toxin A injection, vigorous manual myotomy, and various surgical procedures. Manual therapy is a widely used method for spinal pain management, but there are few reports in the literature that focus on manual therapy for cervical subluxation. Chiropractic treatment is veritably non-existent in consideration of being the main treatment for PTU or congenital muscular torticollis. Subluxation-based chiropractic care has been shown in this case to help contribute in treatment, as it is non-invasive and is a natural method to treat many health care issues.

**Conclusion:** This case study suggests that the removal of vertebral subluxation can be beneficial in resolving symptoms related to PTU and congenital torticollis. In order to establish the value of chiropractic care as an alternative form of treatment for both PTU and congenital torticollis.

## **Improvement of a Functional Movement Disorder in a Patient Receiving Network Spinal Analysis and Somato Respiratory Integration Care: A Case Report**

Chris Lucks BSc, BChiro, Lisa Lucks, DC

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**Introduction:** A 36 year-old female presented to a wellness based chiropractic clinic suffering from uncontrollable hyperkinesia, featuring continuous myoclonic jerks and tics. A neurologist made the diagnosis of a functional (non-organic) movement disorder (FMD) and referred the patient to a psychiatrist for treatment of a suspected psychogenic movement disorder (PMD). She chose not to see a psychiatrist and instead began chiropractic care.

A FMD is described as abnormal movement or positioning of the body due to the nervous system not working properly, but not due to any underlying neurological disease. Patients may experience a range of distressing and disabling symptoms, including: tremors, tics, myoclonus, dystonia, Parkinsonism, and gait disorders. Intervention is aimed at improving symptoms and function, and common treatments include psychotherapy, behavioral therapy, physical and occupational therapy, and pharmacological treatment. Usually a combination of therapies is used and a team approach is recommended. A longitudinal study of 228 FMD patients between 1990 and 2003 found that 56.6% of patients showed an improvement in symptoms within 2 to 14 years, 21.3% remained unchanged, and 22.1% became worse. Subluxation centered chiropractic care may offer an important contribution to the management of patients with FMD's by improving neurological function.

**Methods:** Network Spinal Analysis (NSA) and Somato Respiratory Integration (SRI) care was delivered over a period of twenty weeks. The patient was evaluated for indicators of Adverse Mechanical Cord Tension (AMCT), including vertebral subluxation and spinal defense patterns, according to the NSA protocol. Spinal and neural integrity (SNI) was assessed through static and motion palpation, postural and neurological assessments, and surface electromyography.

**Results:** Significant improvements in SNI were achieved, as were other wellness based outcomes of NSA and SRI care as reported by the patient. These improvements coincided with the steady improvement of all signs and symptoms of a FMD, with a complete resolution of all hyperkinetic movement, myoclonic jerks, and tics by 20 weeks of care.

**Discussion:** NSA care was applied for the purpose of improving SNI, with the elimination of vertebral subluxations being an outcome of this. SRI exercises were used to further increase somatic awareness and promote a shift in the patients' physiology toward greater internal peace and safety. The improvement of SNI combined with other wellness based outcomes of NSA and SRI care may have accounted for the rapid improvement of a FMD in this case.

**Conclusion:** NSA and SRI care was found to be of promise for restoring neurological function in a patient with a FMD. The findings in this case could support further research into the relationships between SNI, vertebral subluxation, and FMD's.

**Key words:** Chiropractic, Network Spinal Analysis, Somato-Respiratory Integration, Functional Movement Disorder, Spinal and Neural Integrity, Vertebral Subluxation

## **Improvement of Adolescent Idiopathic Scoliotic and Sub-Scoliotic Curvatures in Patients Following Subluxation Correction Utilizing the Pierce Results System of Chiropractic Analysis: A Retrospective Case Series**

Mark Smith DC, Eric Jaszewski DC

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**Objective:** The intent of this study is to demonstrate the effectiveness of the Pierce Results System of vertebral subluxation analysis and correction in 14 patients with adolescent idiopathic scoliosis and 22 patients with 'sub-scoliotic' spinal curvatures.

**Methods:** Plain film A-P lumbopelvic x-rays of 14 subjects aged 7-17 with idiopathic scoliosis of 11 degrees or higher were evaluated prior to, and after at least 2 weeks of Pierce Results chiropractic care using the Cobb-Lippman method of scoliosis mensuration. A 'sub-scoliotic' group of 22 subjects aged 2-17 with lesser curvatures of 7 to 10 degrees were also evaluated in the same manner. All subjects were patients in a private clinic in which the Pierce Results System of correcting vertebral subluxation was the only method of intervention.

**Results:** The scoliosis sub-group experienced an average correction of 25.96% over an average of 4.71 specific spinal adjustments. The sub-scoliosis group experienced an average correction of 51.84% over an average of 6.41 adjustments. 6 subjects in the sub-scoliosis group experienced 100% correction upon post-xray.

**Conclusions:** The results of this study suggest: 1) that Pierce Results chiropractic care involving specific spinal adjustment for the correction of vertebral subluxation alone is a potentially viable conservative intervention for idiopathic scoliosis, 2) that intervention prior to the point that a patient can be considered to have a true scoliotic curve may be more effective based on the sub-scoliosis group's results, and 3) that the absolute amount of intervention may not be as important for spinal correction as a conservative, methodical approach to spinal analysis. This is the largest study to date to objectively examine the results of a group of patients with adolescent idiopathic scoliosis from a random sampling in an individual practice following a treatment protocol involving specific spinal adjustment alone.

**Keywords:** Subluxation, Pierce Results System, Adolescent, Scoliosis, Chiropractic

# The Effects of Short-Term Network Spinal Analysis Care on Stress, Anxiety, and Quality of Life in College Students: A Prospective Pilot Study

Michael B. Schmidt BA, DC, Lisa E. Rubin MA, PhD, BCPC, DAPA, James Oppenheim DC, MPH

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## Abstract

**Introduction:** There is a documented mental health crisis on university campuses that is worsening and has no clear solution. The literature regarding Network Spinal Analysis care, which is categorized as subluxation-centered chiropractic, suggests it may be able to address this crisis. This presentation will present the effects of short-term Network Spinal Analysis care on stress, anxiety, and quality of life in college students.

**Methods:** Participants were randomly divided into an experimental group and a control group. Each met with a chiropractor nine times: the experimental group received NSA adjustments; the control group received sham NSA adjustments. Beck Anxiety Inventory scores and self-reported wellness scores were measured pre- and post-intervention. Subjective stress levels were recorded before and after each NSA adjustment session. Participants could write about their experience after each NSA adjustment session and after the full series.

**Results:** Two of the three participants were assigned to the experimental group. The control group participant and one experimental group participant had high stress and anxiety scores, and one experimental group participant had low scores. The experimental group participant with high stress and anxiety experienced decreases, and the participant with low stress and anxiety and the control group participant experienced mostly no change.

Discussion: The results are consistent with previous research and relate to the campus mental health crisis. Limitations include small sample size, participant demographics, and concurrent interventions received outside the study.

Conclusion: The results suggest that short-term NSA care may be effective for students with high stress and anxiety, but inconclusive for students with low stress and anxiety. Related studies should be conducted in a more traditional student population with a larger sample size. Future subluxation-centered chiropractic research should measure outcomes relevant to specialized populations with the goal of including chiropractic in the standard services for those populations.



## Case Report: Resolution of Pain and Lower Extremity Weakness Associated with Lumbar Disc Herniation following Gonstead Chiropractic Adjustments and IDD Therapy

Luke Henry DC

**Objective:** This case study describes the non-surgical care of a 59-year-old male with a 16 mm compressive L3-L4 disc herniation using Gonstead chiropractic technique to correct vertebral subluxation and IDD Therapy.

**Introduction:** Gonstead chiropractic technique is based on mechanical engineering principles and uses specific adjustments to correct vertebral subluxation. Non-surgical spinal decompression has been proposed as a novel approach to the treatment of acute and chronic lower back pain and radiating symptoms due to disc bulges, herniated discs, degenerative disc disease, sciatica and facet syndrome. Decompression repetitively unloads the disc and facet joints and has been shown to lower intradiscal pressure into the negative range and increase disc height. IDD Therapy, a type of non-surgical decompression, differs from older traction modalities in that it includes computerized distraction, the use of an actuator, variable angles to target specific segmental levels, alternating tension and oscillation.

**Intervention and Outcome:** The patient's care consisted of Gonstead side posture chiropractic adjustments, back strengthening exercises, IDD Therapy, cryotherapy and low-level laser. IDD Therapy was rendered in accordance with spinal decompression protocols taught at Parker University and the International Medical Advisory Board for Spinal Decompression. Over a period of six weeks pain was reduced from 10/10 VAS initial to 0/10 final, lower extremity weakness resolved and the patient was able to return to normal activities. The patient remained free of pain and weakness at a six-month follow up.

**Discussion:** The existing literature is limited but indicates potential benefit of non-surgical decompression for lumbar disc herniation. Previous literature has not investigated spinal decompression in conjunction with chiropractic care.

**Conclusion:** In this case, the patient had an excellent outcome and was able to avoid injections and surgery. Further investigation is encouraged.

**Keywords:** Chiropractic, chiropractor, spinal manipulation, lumbar disc herniation, vertebral subluxation complex, Gonstead chiropractic technique, IDD Therapy, non-surgical spinal decompression

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## Outcome of an Infant with Chronic Constipation Following Upper Cervical Care: A Case Report

Bruce Giffen DC, Hannah Orem DC

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**Introduction:** Constipation affects up to 40% of infants (1); however, there is a limited amount of research available concerning the effects of chiropractic care, specifically upper cervical chiropractic care, on the treatment of improper bowel function. A 2014 integrative review of the literature on the chiropractic care of infants with constipation generated 14 case reports, one case series, and one review of the literature; only two case reports reviewed the effects of an upper cervical technique (2).

**Methods (Case Presentation):** A three and a half month old boy was presented by his parents with complaints of chronic constipation, reflux, and irritability after prior unsuccessful medical and chiropractic treatments. Indicators of atlas vertebral subluxation were identified through palpation, National Upper Cervical Chiropractic Association (NUCCA) protocol, and radiographs. A NUCCA chiropractic adjustment directed at correcting the atlas subluxation complex was performed.

**Discussion:** Only one adjustment was given as indicators of an atlas subluxation did not return on subsequent check-up visits. Symptomatically, the infant experienced improvement within two days after his adjustment and resolution of symptoms in the following three to four months.

**Conclusion:** The results of this case indicate that future research is warranted to address the effects of upper cervical care in the management of chronic constipation. Additionally, further research should be directed to explore the impact of chiropractic care specificity in relation to number of adjustments required in attaining resolution of symptoms.

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## Examiner Reliability in Analysis of Orthogonal Radiographs

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**Introduction:** Before-after intervention orthogonal radiographic analysis procedures used by the National Upper Cervical Chiropractic Association (NUCCA) and others, lack evidence of suitable inter-examiner reliability. Significant reliability must be demonstrated to justify risk in patient exposure for obtaining after-correction films. Achieving a 90% examiner agreement in side of Atlas laterality and rotation, with an intraclass correlation (ICC) of 0.9 is this study's goal.

**Methods:** A four phase study design reduces inherent variability in procedural analysis, intending to end investigation early for conservation of research resources. Phase one trains examiners in fine tuning marking and measuring procedures for orthogonal radiographic analysis, conducting trial runs, while troubleshooting study protocol. Phase two collects data from examiners maintaining data integrity by using a data manager. Data analysis occurred after 100 film sets to determine if needed reliability was achieved. Phase Three completes analysis using a sample size, 254 film sets, with the power to demonstrate statistical significance in the results.

**Results and Discussion:** For the first 100 sets of films, percentage agreement for side of atlas laterality is 98%, 76% for rotation. ICC for laterality is 0.606 (95% CI: 0.465, 0.717), for rotation 0.716 (95% CI: 0.599, 0.802). Analysis of the final dataset is ongoing.

**Conclusion:** The first 100 set ICCs represent substantial but imperfect agreement between examiners, not achieving needed reliability for Phase Two. Phase three is complete with all 254 film sets analyzed. Early results from initial analysis indicate study goal was achieved. Phase four involves the intra-examiner portion of reliability study. A protocol currently is being protocol for IRB approval. Once completed, evidence will exist in the indexed literature substantiating reliability in analysis of pre-post atlas correction orthogonal radiographs.