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EDITORIAL COMMENTARY: An omnibus approach to Chiropractic Science

A basic problem in chiropractic is illustrated by the following observation: after having chosen one question from a core group of fundamental questions and after having presented the question to a gathering of chiropractors who practice various techniques, one is inundated with more answers than there are chiropractors present. It is bad enough that rarely any two answers among all the answers are the same, but that the questioner finds that the majority of chiropractors as individuals have several answers. Now why do you think that this is true? Do you think that this much variation exists within the medical community? Isn't this a fundamental problem in chiropractic? What is the cause of this problem? The primary cause of this problem is that there is not a sufficiently-developed relevant-body of science supporting chiropractic. This is the bad news. What would a sufficiently-developed relevant-body of science supporting chiropractic do for chiropractic? A relevant body of science would drastically reduce the number of techniques, establish a hierarchy of modalities that would be acceptable for a standard of care, and revolutionize the face of chiropractic education. The good news, if you can call it that, is that there is not a body of science that "disproves" chiropractic. Why is this?

The primary reason why is because chiropractic deals with small differences- small displacements, small rotations, and small misalignments to name just a few. These differences are an order of magnitude too small to presently be in the scope of medical practice but, interestingly, not too small in many instances for today's technology. Have you ever heard of an orthopedic surgeon operating on a chiropractic subluxation? (Many chiropractors certainly feel comfortable saying that an operation was performed that was traceable to an initial subluxation. But where is the "proof"?) A prevailing paradigm in medical practice is the belief that the bigger the differences the more important the differences and therefore the more that medical intervention is both necessary and justified. (This is harmonious with the idea that the more obvious the symptoms the more likely the

diagnosis is correct.) This prevailing paradigm may be true for many individuals and is assuredly true for some individuals (trauma) but does not necessarily hold true for the majority of individuals or the population as a whole. This is because the origins (the first cause) of most recognizable problems are based in small differences which in time become greater in frequency and in magnitude. Problems get compounded! The medical community eventually recognizes most signs and symptoms, ventures a diagnosis, assigns either a name or a cause (or both), e.g., sciatica or stress, and then provides a "treatment". It is the initial medical treatment with which many chiropractors disagree because they disagree with the medically stated cause (origin) of the problem and therefore with the medical solution.

It should be made clear that there is significant disagreement on many topics within the medical community. The medical community is being inundated with scientific information. There is no credible way to know if your medical doctor is reading the appropriate journals during the evening but the expectation is and the evidence suggests that good medical doctors are doing their homework within the medical paradigm, in part because these journals are reasonably scientifically based. This does not mean that there is not conflicting, inadequate and sometimes irrelevant research in medical journals. Medical doctors read journals, in part, because of the high growth rate of relevant information in their field of practice and because of the ease of being involved in litigation if they do not remain current.

Can we say that good doctors of chiropractic are doing their homework? In general, probably not. In upper cervical chiropractic in general and NUCCA in particular the answer to this question is yes. Certainly NUCCA doctors read The Upper Cervical Monograph; this is just one avenue for doing their homework. Many also read CRJ and some read JMPT and IVSR. Of course there is a list of other publications that are read from Canadian Chiropractor to Today's Chiropractic. This is consistent with the complexity of the seminars, especially those of NUCCA. Why do

chiropractors, in general, not read chiropractic journals? The answer most likely is that what appears in chiropractic journals too often does not affect someone's practice. Neither does it appear to have any significant bearing on either chiropractic education or the standard of care! There is neither a legal imperative nor a scientific imperative to read chiropractic journals. For example, when was the last time or even the first time anything appeared in *JMPT* by a NUCCA practitioner? When did something appear in *JMPT* that had a bearing on your practice? Why should all of chiropractic have essentially just one gatekeeper to the medical world, i.e., *JMPT*?

Much of what has been passed along from medical doctor to medical doctor is from individual observations and experience; this is also the case in chiropractic. By themselves observations are insufficient in resolving conflicting views and apparently conflicting interpretations. This fact was recently illustrated by the hormone-replacement therapy study because it superceded the collective medical observations. Studies such as the one done on hormone-replacement therapy can cause a drastic change in direction. Why? Because the "gold standard" experiment of two identical looking pills, one with active ingredient and one with placebo, was finally used! (For more on the nature of placebos see: www.hsibaltimore.com/ea2002/ea_020725.shtml) Chiropractic does not have this luxury. Placebo adjustments are not appropriate for most upper cervical work, especially hand adjusting. In the medical field, information is frequently from companies, pharmaceutical in particular, with products to sell and these companies often do not provide the entire story; consequently, there is a movement taking place for "academic detailing" to tell the complete story. (Keep in mind that you cannot patent something that is natural. Cancer research, etc., is research on drugs!) Expectations are for the medical doctor to take information off the Internet in real time while their patient is in their office.

An important secondary reason why there is not a sufficiently-developed relevant-body of science either "proving or disproving" chiropractic is, in large measure, because of the variation in what is measured (precision), the variation of what is measured (anatomically/physiologically), the significance of what is measured (validity), the accuracy of the measurement, the reproducibility of the measurement, and the variation in the instruments, techniques, and skills of the doctors. It is incumbent upon chiropractic to deal directly and appropriately with the primary and secondary reasons if it is justifiably to take its special place in healthcare.

Another reason why there is not a sufficiently-developed relevant-body of science "proving" chiropractic is that most chiropractors do not know if they have been successful in their actions with patients except through changes in

symptoms and patient verbal responses. That is, the "evidence" is either not well documented or the evidence is "soft" because the "measurements" are too subjective. This is often evidenced in the literature that is in the form of testimony without quantification. Equally inappropriate is to state that some measurement shows a 6- standard deviation change. If you knew that a chiropractor did the same things to the same patient for the same "problems" two different times with the result being no apparent change the first time but a diminution of the negative symptoms the second time, then what would be your conclusion? ...The doctor must have done something different the second time. A third time of the same modality might clear all negative symptoms. Things happened by chance (the chiropractor is not affecting the symptoms). Something happened between visits (the patient was put on a new medication by their medical doctor) that the chiropractor was not aware of or did not notice. The changes that are measured are not correlated with the symptoms. The percent reduction of the misalignment was too small or the misalignment was changed to an equally bad misalignment but with a different set of symptoms, which have not yet become manifest.

Appropriate research in establishing a scientific basis for chiropractic must address the validity and efficacy of measurement. Assuming that chiropractic can get its "act together" by addressing the problems associated with these three "reasons", one might ask what is the potential significance of chiropractic.

What is not appreciated is that the overall effect on the health and wellness of society may be greater by taking care of the causes of the small differences rather than the large differences. What is somewhat obvious is that small differences often lead to large differences. This is not to say that a given small difference necessarily grows in magnitude but that a critical negative small difference leads to other negative small differences which through compounding and a domino-like effect result in a definable, large, deleterious problem. Given sufficient time the expression of a small, critical difference can potentially be expressed in any number of ways as an apparently mutually exclusive, large, deleterious difference! Isn't this what chiropractic believes? Now what is not so obvious is that even if all of these small differences are assumed not to lead to either chronic or acute "medical" problems, they still may have more importance in healthcare. For example, how much greater would be the productivity of people if they just felt better? How much better would be human relationships? These answers are mostly unknown; some may be unknowable. The practice of medicine is focused in sickness care and early detection verses prevention. By being at one end of the wellness-sickness continuum, the medical profession cannot define the other end. And they will not get close to the other end unless they are able to

increase their sensitivity to small, critical differences. There is not enough money in the wellness end of the continuum to justify their involvement and they are not adequately handling the scientific information available. In general people do not recognize the existence of a problem until it "gets serious" or "becomes medical".

The money spent on "healthcare" is spent on large differences ("sickness care") and not on small differences. Often the small differences are associated with "wellness care". Large differences require expensive technologies but small differences actually may require more research and sophistication! With the advance of basic science and technology many differences are now potentially within the realm of applied science. Soon, if the right questions are asked, scientists and researchers will look at many of these differences. Scientists are a unique group: they are curious but still human—they are too often driven by the funding sources that are available because research is usually expensive. Is chiropractic ready for this opportunity? Certainly not as a profession. The possibility does exist with the right group. If we know the right questions as individuals we usually cannot agree on the right questions as a group. And on those occasions when we do agree, we find it difficult to prioritize the relative importance of the questions. If the group is too closed then questions lack a reasonable context; if the group is too broad then the questions lack focus and thus significance. Success requires the right group at the right time with the right questions and the right plan to do the necessary work. This group must also have the will and the financial resources.

Realignment of vertebrae and restoration of normal nerve functioning have not become important parts of health care for the vast majority of Americans. The cause and effect relationship between misalignment and the development of health problems has not been sufficiently established. One might ask how many people without misalignments have "health problems" and how are the problems categorized. (A good place for upper cervical posture checks and health questionnaires!) What research areas may be most important to upper cervical? What results are most scientifically significant? One might, for example, look at patients who lose their adjustments, go back into the pre upper-cervical care negative- symptoms (which have been labeled and defined and are concurrently being monitored by the medical doctors of these patients), get readjusted and have the negative symptoms disappear is a much more focused and powerful approach than what is customarily done. (See the "case study"/testimonial in this issue.) R. R. Gregory has stated on several occasions that in his early research he re-created the original subluxation in a patient in order to see what signs and symptoms would be expressed. He was not disappointed to see the original signs and symptoms reappear but at some point decided that he had let the subluxation exist for too long without correcting

it. Upon correcting the subluxation the signs and symptoms again disappeared.

Is there a way to get the medical profession to look more favorably on upper cervical care in general and NUCCA in particular than on alternative medicine? Is upper cervical chiropractic an alternative to medicine but not part of alternative medicine? Is upper cervical chiropractic a supplement to medical care? Can upper cervical chiropractic define through research and results such a unique and successful area of care that the medical profession will refer /defer to it and thereby insurance companies and government will also accept it and support it?

Define our role and then see how it can strategically fit into the grand scheme both now and in the foreseeable future. It may actually be much more desirable to think of upper cervical specific chiropractors not as chiropractors but as surgeons who (do not do operative methods but instead) do non-invasive, vectored, "manual-methods" to treat some spinal associated injuries and diseases or conditions that are associated with the misalignment of vertebrae and, to a reasonable level of statistical significance, are not associated with aligned vertebrae. However, there is an even a more fundamental problem of what is scientifically associated with the misalignment of vertebrae. This is both more fundamental and more encompassing than conditions and diseases of the spine because it includes all systems that are affected, not just that of the spine. This is what needs to be answered by scientific research. This is why the scope of the Atlas Subluxation Complex and the Atlas Subluxation Complex Syndrome by their very definitions, are so compelling. Only by such research can the scope of chiropractic move from conditions of the spine to any conditions, diseases, or syndromes of any system or anatomical region in the body where the effects of correction of misalignments can be measured and quantified, i.e., that which appears to be self-evident in everyday upper cervical specific chiropractic. (See excerpted section from NUCCA Protocols and Perspectives, (2002), in this issue of the Monograph.)

Ask for at least intellectual support if not also capital support from colleges and universities of chiropractic. Explain to them that we perceive that the chiropractic colleges have a dual responsibility: teaching chiropractic students and "academic detailing" through chiropractic research. Show them why we think that upper cervical specific holds the most promise for having the right group at the right time with the best plan to put chiropractic on a sound footing in the scientific community. Argue for a symbiotic relationship in "academic detailing" by focusing on upper cervical chiropractic with roots to Grostic and Gregory.

The problem of success by chance needs to be addressed.

Don't you think that a typical medical doctor might have no more than 2-3 inexplicable cases per decade which they are personally aware of from their patient base that show vast improvement after chiropractic care. With 50,000 or more chiropractors out there some things should happen just by chance! Perhaps a 100,000 or more new cases a year just by chance (more than enough to account for the wealth of case studies and anecdotal research). We need to show that success is not by chance; we can do this by carefully defining our "experimental" population base. This can not be done by only measuring changes in signs and symptoms, although this appears to be the major focus of chiropractic journals. Other measurements including, but not limited to post x-rays and postural changes, need to be made. The reason that post x-rays and postural changes have been the "gold standard" for upper cervical specific and NUCCA in particular is because they are not sign and symptom dependent. This is why the accuracy, precision, and reproducibility of these measurements has been and still is so critical. Certainly it seems reasonable that the Grostic-Gregory group of chiropractors has 100,000 successful new cases per year that are not by chance! It would be from this base that research would be done.

There are many areas of medical practice where the question of chiropractic care probably would not arise; e.g., dermatology, plastic surgery, obstetrics- gynecology, etc. The connections need to be made, for example, with the GP, the neurologist, and the orthopedic surgeon. These are the classifications of medical doctors that the research needs to explicitly affect if it is to have the necessary impact in providing the desired quantum leap.

How can the limits of Grostic-Gregory-NUCCA upper cervical chiropractic be defined? Ten thousand good case studies in upper cervical specific would clearly define both the efficacy of upper cervical specific and the limits of upper cervical specific "chiropractic". Lacking these case studies what could be done? Certainly not jumping into fundamental, mainstream scientific research! Ultimately what can be done to get data/results that will intellectually require (force) the scientific community to do research to develop hard scientific data that establishes the nature of spine/nerve/muscle/gland/ organ/brain interactions should be our objective. Everything else would then follow. Now the real questions are what data is needed now and how do we get the data. John D. Grostic argued for "focused

research"; NUCCA should argue for research that is fundamental, critical, and focused. The basic measurable in NUCCA is postural distortion. The hard data in NUCCA is the difference in the pre and post x-rays. The strength of postural distortion is the difference between the post-adjustment measurements and the pre-adjustment baseline measurements for an individual patient. In the short term, postural distortion should be the foundation from which NUCCA/NUCCA must build. This assumes both integrity and appropriateness of the measurements and the process of measurement.

In designing a research plan it may be advantageous to look at cases where patients are not improving medically; also there should be cases where the person should be having only chiropractic care, not withstanding the legal implications of not having medical treatment but by still having medical oversight. In experimental design, "vitamin C" alone is different than "vitamin C and M" together or "vitamin M" alone (C=Chiropractic; M=Medical). You should not throw out the simple "Latin Square" design. You do need "vitamin C" alone. It is difficult enough to avoid placebo adjustments and still do quality research.

There is "chiropractic science" and science that "supports" the practice of medicine. These two "sciences" are nearly mutually exclusive. This is, to a large extent, the result of forces that drive the pharmacological end of medicine. This is not to deny, as evidenced by the changing content of chiropractic journals, that the last decade has seen an improving chiropractic research base. There is chiropractic science that is learned in chiropractic colleges and then there is that body of knowledge that chiropractors learn while in practice. Chiropractors often seem to "fall-back-on" what they have learned in college and practice that which they learned in technique/paradigm seminars and programs subsequent to college. What keeps Grostic-Gregory-NUCCA chiropractors separate from one another is what they have learned outside of the college classroom. Success in research will change all of the above for the better.

It is not important as to where we are; what is important is where we are going. To succeed requires a workable plan and the right people to see the plan to its completion. The first step has been taken and the question has been called: If not now, when?

Chronic Fatigue and Immune Dysfunction Syndrome: Purple Feet and a Pounding Heart

by Alice Teisan

Abstract A first-person account by a health professional (nurse) who has struggled with Chronic Fatigue and Immune Dysfunction Syndrome (CFIDS) symptoms since 1992, a year after receiving a head injury. With a relapse in 1996 of CFIDS symptoms while working in a hospital setting, Ms. Teisan was seen by an internist, a cardiologist (tilt test), and an endocrinologist who referred, tested, and categorized symptoms respectively. The endocrinologist identified symptoms of Neurally Mediated Orthostatic Tachycardia (NMOT) and started a one-year medication therapy. By October of 1999 with CFIDS symptoms still present and after just having "completed a year of unsuccessful yet intensive Chiropractic treatment" she was recommended by a friend to see Dr. M. Dickholtz, Sr. Her internist "prescribed the (NUCCA) treatment". After the first NUCCA adjustment "heart palpitations, tachycardia, and irregular beats subsided immediately". Retrospectively Ms. Teisan realized that "NMOT symptoms along with exacerbated CFIDS symptoms begin almost immediately after . . . alignment was no longer holding". Symptoms appear to be lessened and pain more manageable when in adjustment. Editor.

The article is copyrighted by Ms. Alice Teisan and can be accessed at: (<http://www.immunesupport.com/library/print.cfm?ID=3656>) 06-19-2002

It was a warm April afternoon in 1996 and I was working as a nurse at the local hospital. While standing still, talking with one of my patients, I began feeling faint and quickly excused myself. Another nurse on the hospital unit instructed me to sit down as she performed a glucose test, blood pressure and electrocardiogram (EKG). However, I knew from my body's horrendous response that I was experiencing a relapse with Chronic Fatigue and Immune Dysfunction Syndrome (CFIDS).

Based on the recommendation from a journal article that correlated CFIDS with fainting, I quickly scheduled a tilt table test, with the approval of my internist, Dr. Vesna Skul, MD. The test, performed by a cardiologist, involves being strapped to an X-ray table. The straps keep the patient from shifting weight, thus altering the test results. Then an EKG is hooked up to monitor the patient's heart rate throughout the test. Next an IV is started as a precaution in case emergency medications are needed. The test begins while the patient is in a supine position (lying on the back), so the doctor can establish a baseline heart rate and blood pressure. Afterwards, the doctor moves the X-ray table to a standing position. Throughout the test the blood pressure along with the heart rate are monitored at regular intervals. Also, physical changes and my subjective symptoms are documented.

Within two minutes of the test, when I was placed in a standing position, my heart rate went from 94 to 168. Other symptoms included a beet-red face and neck, the feeling of my heart pounding, a throbbing head, uncontrollable sweating, nausea, exacerbated fatigue, severe trembling, and feet that were turning purple. I felt even worse with the passing of the next 21 minutes while left in the standing position. Within five minutes of being returned to the lying position my heart rate dropped under 100. The symptoms caused by the test remained for days.

My body's unique response to the test mystified the cardiologist as my heart rate rose while my blood pressure remained normal - when it should have dropped. He recommended treating the high heart rate with Inderal, a beta-blocker medication that slows the heart rate. Within a month, I knew this straightforward treatment for common heart problems was the wrong treatment for my disorder. I could not get out of bed without feeling faint.

A nursing colleague discussed my medical history with an endocrinologist. She explained that I had struggled with CFIDS since 1992, had seen over 25 specialists and tried several treatments in an attempt to find answers to my problem. Also she gave him the recent Tilt table test results. The endocrinologist was doing a research study on a condition called Neurally Mediated Orthostatic Tachycardia (NMOT). This is a rare autonomic nervous system problem where orthostatic refers to a change in position (in my case, standing) and tachycardia is a heart rate over 100.

Therefore, when receiving the endocrinologist's initial call in July, I listened eagerly. He began by saying, "Your feet turn purple, your heart pounds, and you always fidget when standing." During this first contact, by phone, I was to learn how well he knew my symptoms that were revealed by the Tilt table test in May. After seeing me, gratis, he began a one-year medication therapy, including up to 11 pills a day for nine months. The treatment helped regulate my heart rate; however, Dr. Skul was concerned about the difficulty my body experienced from the side affects of the medications.

During this 18-month relapse I went through a period of deep depression. I had lost the ability to work, live alone, or stand without feeling faint, which profoundly affected all areas of my life. The depression therapy was part of the above treatment.

Once my heart rate was under control and my health was improving I began doing mental tasks. As my stamina increased, I was able to work in a part-time clerical position for a dental office. However, I continued to get many of the same limiting CFIDS and NMOT symptoms within three hours of starting work. Along with the NMOT symptoms earlier mentioned, my CFIDS symptoms included low-grade temperatures, arthritic type pain, severe headaches, blurred vision, inability to concentrate, slowed reaction time, and increased environmental sensitivities to noises, air quality, temperature, and odors.

In October 1999 when I was still experiencing CFIDS symptoms, a friend recommended I see Dr. Marshall Dickholtz, Sr. He is a National Upper Cervical Chiropractic Association (NUCCA) specialist. In Chiropractic, NUCCA is a specific form of chiropractic adjusting, focusing on an atlas vertebra relationship to the head and the rest of the cervical spine at the brain stem level. Having just completed a year of unsuccessful yet intensive Chiropractic treatment, I listened apprehensively, and prayed that my hopes wouldn't be dashed again by yet another ineffective, all-consuming treatment option. After researching the treatment and discussing the findings with my internist, she then prescribed the treatment. I realized it met all my criteria - including being affordable, non-invasive, having a high success rate, and being respected within the western medical framework.

Prior to the appointment with Dr. Dickholtz, Sr., I completed an extensive health history profile. One of the first questions on the health history was, had I ever had a head injury? I thought, "Who hasn't hit their head?" Then I remembered four memorable head injuries throughout my life. The most serious one took place a year prior to CFIDS and the most recent one occurred six months before seeing Dr. Dickholtz, Sr.

My initial appointment with Dr. Dickholtz, Sr. was extensive. After looking at the completed health history, he did six different kinds of tests to determine the problem. He asked me to sit in a chair, while he used a neurocalometer that measured the temperature difference of each side of my cervical spine (from the shoulders to the base of the skull). He also performed a supine leg check, which measured leg length differences in relationship to muscle spasms that occurs on each side of my body. Another test involved standing on an anameter, which looked at a posture scan in relationship to my hip level and pelvic rotation position. There was a horizontal line chart that showed the level of the ears in the standing position relative to the taking of three X-rays, when seated, of the cervical spine and skull that were taken lastly.

After all the tests were performed, Dr. Dickholtz, Sr. examined and measured the X-rays and determined the proper adjustment needed to return my spine and head to a

balanced position. Through the X-ray measurements, he was able to return the C1 (atlas) and the rest of the vertebrae to within a quarter degree of their proper positions.

Once the specific chiropractic adjustment was performed, it took my body time to acclimate before standing without feeling faint. When able, I walked the length of the exam room a couple times allowing my body to rebalance itself from the adjustment (correction). Before the four-hour appointment was completed, all six of the above tests were performed again and post X-rays taken to make sure that the adjustment was correct.

Dr. Dickholtz, Sr. describes the adjustment as equivalent to major surgery done on the body. Recovery time of a month is necessary before experiencing benefits. In my case my heart palpitations, tachycardia and irregular beats subsided immediately.

Follow-up visits include periodic checks to make sure the adjustment is holding.

Within a month of being adjusted I began to feel my neck, shoulder and back muscles loosen. Many aching, arthritic type pains, severe CFIDS-type headaches and the beet-red color in my face and neck subsided.

The ideal is to have the first adjustment be the only one needed, which many of his patients have experienced. My adjustment's average holding time is three to four months.

The initial adjustment held four months before I hit my head, knocking my alignment out of place. Not totally believing the chiropractic treatment was helping I waited until my next scheduled appointment, two months later. At the time I didn't realize that my NMOT symptoms along with exacerbated CFIDS symptoms begin almost immediately after my alignment was no longer holding.

Also during the two months that my adjustment was out from December 2000 to February 2001, after having worked three and a half years part time, I began to experience exacerbated CFIDS symptoms. The increased fatigue, inability to concentrate, increased tremors, and a heart rate over 140 when standing, along with fevers and the inability to perform simple daily tasks, resulted in my third total disability. However, within a week of having my neck readjusted, my heart rate dropped under 100 when standing. When my adjustment is holding, I experience great relief even though I am still disabled.

Dealing with CFIDS requires patience, persistence, stamina and a hope in Heaven to complete the journey well. How glad I am that I found a NUCCA Doctor, even though it has not provided the ultimate cure. It has provided restoration of new life to my body and a lessening of many CFIDS related symptoms, along with a continued hope for further healing. When my chiropractic adjustment is holding, the day-to-day pain and difficulties with CFIDS

are much more manageable and less painful, allowing me to have a focus on something more enjoyable than my severe suffering.

For more information, contact the author, Alice Teisan ,

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Chronic Fatigue and Immune Dysfunction Syndrome: Case Notes

by Dr. Marshall Dickholtz, Sr.

Notes (July 2002) provided by DR. MARSHALL DICKHOLTZ, SR., in the case of Ms. Alice Teisan, reprinted with her permission through Dr. Dickholtz.

CFS for 8 years

Occipital headaches twice a week for 8 years

Cervical spinal pains and Sacroiliac pains

Heart Palpitations

Shoulder effected parathesis in hands

One and only cervical x-ray exam was on August 25, 2000.

PRE-ADJUSTMENT MEASUREMENTS: Basic Type IV

Atlas was right one degree of the condyles with a two and one half degree anterior rotation of atlas; odontoid and axis spinous were also right one degree.

Anatometer measurements indicated left ilium was two units high with an anterior rotation of two degrees. Also the fixed point (7th cervical) was right one degree from the vertical axis. The weight balance indicated 7.4% higher on the left leg.

POST-ADJUSTMENT MEASUREMENTS:

Anatometer measurements indicated that the first

adjustment balanced patient in all planes; weight differential reduced to 1.4%. Laterality reduced to 0.0 and Rotation reduced to 0.25 degrees anterior; lower (angle of the) neck also reduced to zero.

On all office visits when patient retained the corrective adjustment the ilii were level and aligned in the transverse plane. The fixed point was in the vertical axis.

Comments: New x-rays are due. Whenever a patient has had their neck manipulated before coming to my office, I inform them that what I am seeing on their first set of x-rays(pre) is where the last manipulation (possibly) left the vertebrae and that in the future the vertebrae may go out in a different combinations of misalignments. A different vector to my adjustment would then be necessary. This (vector) can be only ascertained by a new set of x-rays before another further adjustment. I do not take new x-rays until I find it absolutely necessary.

Patient held the first adjustment until February 14, 2001; almost eight months with seven visits between the eight months for examinations only.

As of July 6, 2002, has been readjusted eight times in 20 visits, more than average for this practice.

Protocol for Biomechanics Using the Multiple Support Headpiece

by Dr. Robert Brooks, D.C..

Dr. Robert Brooks is a NUCCA doctor of long standing and is widely known and respected among his colleagues as an expert organizer, an eloquent spokesman for NUCCA, an avid supporter of Palmer College, and a tireless recruiter for the advancement of upper cervical in general and NUCCA in particular. More NUCCA doctors have been shown the "atlas of the world of NUCCA Chiropractic" as a way of professional practice by Dr. Brooks than by any other living NUCCA doctor. What is presented in this article shows some of the innovation and development that has consumed his professional attention over the last decade and a half. His successful use of the multiple support headpiece has grown to the extent that he has educated doctors who now use many of his ideas in their practice. Dr. Brooks' practice is located in Tulsa, Oklahoma. Editor

The Single Support and the Multiple Support Headpieces

The fundamental difference in the single support (traditional) headpiece and the multiple support (or now complete support) headpiece is the use of the head in the adjustment. With the traditional headpiece, the head has only a single support and the head becomes a force in the adjustment. The use of the other headpiece is accomplished by stabilizing the head and moving the vertebrae without using the weight of the head in the adjustment.

The classic support places the center of gravity of the skull above or below the support, depending on the Basic Type of the cervical misalignment. Much information has been contributed from Gregory, Berti, Denton, and et al., and has been taught in the NUCCA seminars and published in the seminar material, the Biomechanics Basic Book and the NUCCA Monograph.

The weight of the head when a single support is used is critical to the accomplishment of the reduction of the misalignment factors of the ASC. The frontal plane misalignment is the primary consideration. By placing the mastoid process above or below the center of gravity of the skull and by using the flat or round end of the headpiece the apex or the skull will move toward or away from a vertical axis. No considerations in headpiece placement for the transverse or sagittal plane were made before the development of the multiple support headpieces.

The side flaps of the multiple support headpieces were designed to aid in the reduction of large rotations. The floating mastoid support could be placed in the position of the single support headpiece. The problem with the use of this headpiece was that the mastoid support and the two flaps formed a three-point support that cupped the center of gravity of the skull. This stabilized the head, took the weight of the head and the movement of the head out of the adjustment and altered how the fulcrums and lever systems worked. Many adjusters, skilled in the use of the single support headpiece, were unable to correct the ASC with the same efficiency due to the difference in the biomechanics.

Bio-mechanical Considerations

As the Atlas Subluxation Complex (ASC) is created, the spine breaks down and the atlas is displaced in a direction. This direction is called the production/reduction pathway or the ASC and becomes the final resultant in its correction. This pathway will have a direction and usually a clockwise or counter clockwise torsion.

In the procedure developed by the National Upper Cervical Chiropractic Association (NUCCA), the final resultant is determined by a combination of the height vector and the rotation vector. This resultant is calculated by the measurements of the lateral movement of the atlas in the frontal plane and the rotation of the atlas in relationship to the skull in the transverse plane. These considerations are made based on the "X", "Y" and "Z" coordinates of an orthogonal coordinate system.

Use of the orthogonal coordinate system to determine the vectors necessary to reduce and correct the Atlas Subluxation Complex (ASC) has been very effective. Its value is particularly beneficial in the frontal plane where the center or "0" position aligns the skull, the atlas and the cervical spine to a considered normal. The loss of this relationship greater than one half of one degree of any of these structures measured by angular rotation in the frontal plane is indicative of the presence of the ASC and ASC syndrome. It has been demonstrated that the entire spine returns to a postural position over the body's center of gravity and center of mass and aligns to a vertical axis.

The anatomy of the cervical spine lends itself to the calculation of the height measurement in considering the final resultant necessary to correct the misalignment of the cervical spine back to a normal position. Imposing a line analysis on the structures of the head and neck describe the movement of the atlas laterally as the spine breaks down to create the ASC. The more accurate this resultant is measured the more effective the forces are in the correction of the head and cervical spine to a vertical axis and to return the atlas to a horizontal plane.

The movement of the Atlas vertebra into the left or right frontal plane occurs in relation to the circles represented

by the condyles and the superior articular surfaces of the Axis vertebra. The measurement of these two circles is fundamental to the calculation of the height vector. Because of the relationship of the atlas to the skull and to the lower angle line that represents the cervical spine, this single direction is relatively easy to calculate based on angular rotation measured in degrees and translated into inches in the resultant for a twenty inch notch transverse distance.

The rotation vector used in the calculation of the final resultant vector becomes more complicated when the transverse plane is used exclusively. The axis of rotation for the atlas misalignment measured in the transverse plane on the vertex X-ray remains a mystery even though much thought has been given to its true position.

The relationship of the rotation of the atlas vertebra measured in the transverse plane has become more complicated. The rotation vector has become a combination of the saggital and transverse planes of motion with the use of multiple post X-rays. The atlas rotation measurement may not be simply anterior or posterior on the condyle on the side of laterality with axis of rotation on the other condyle, but it is possible that the atlas may be:

- Anterior on the condyle on the side of laterality and neutral on the opposite condyle
- Anterior in relation to both condyles
- Anterior on the condyle on the side of laterality and posterior on the opposite condyle
- Posterior on the condyle the side of laterality and neutral on the opposite side
- Posterior on both condyles
- Posterior on the side of laterality and anterior on the opposite side

This picture becomes even more complicated when the relationship of the atlas to the axis is considered. The position of the rotation of the axis spinous process will follow the linear and torsion movement of the axis into the production pathway of the ASC and will determine the relationship of the cervical vertebral bodies and the posterior facets. The atlas lateral masses may be:

- Anterior on the superior articulating surface on the side of laterality and either normal, anterior or posterior on the opposite superior articulating surface.
- Posterior on the superior articulating surface on the side of laterality and either normal, anterior or posterior on the opposite superior articulating surface.
- Anterior on the superior articulating surface on the opposite side of laterality and either normal, anterior or posterior on the superior articulating surface on the side of laterality.
- Posterior on the superior articulating surface on the opposite side of laterality and either normal, anterior or posterior on the superior articulating surface on the side of laterality.

In this perspective the map is not the territory and the orthogonal axis becomes three-dimensional. Up to now we have been unable to create a vertical axis in the saggital plane. This is due to the lack of a mechanical center of the head, atlas and cervical spine (divided into a front and back half). This prevents, with certainty, the measurement of the normal or misaligned position of the structures of the head and cervical spine in the saggital plane. By including the considerations of the saggital plane into the transverse plane measurements, however the relationships become more predictable and the rotation vector becomes more accurate.

If it were possible to calculate the "true rotation" of the atlas on the side of laterality the correlation of the ASC would be easier and more effective. Less force could be used and the resultant would become more predictable. New developments in understanding the changes measured on the post X-ray make this possible.

Not only does the atlas vertebra displace into a final resultant as the entire spine misaligns, but it is driven into a right or left hand torque or torsion. Up to now these torsion measurements have been determined by the position of the axis spinous process and are correct most of the time. Occasionally the position of the axis spinous process is not definitive for the "appropriate torque".

The position of the cervical vertebra and the skull are determined by the direction of displacement and torque. There are more structures involved with the lateral movement and by the torsion of the head and neck than just the lateral movement of the axis spinous. Even though the lateral movement of the spinous process has proven to be a predictable factor in determining torque, there are other indicators.

Not only does the atlas lateral mass move lateral and anterior or posterior in relationship to the condyle on either side, but also the atlas lateral mass may move anterior or posterior on either of the superior articulating surfaces of the axis. The opening or closing of the cervical facets and the anterior, posterior or lateral movement of the cervical vertebral bodies in relation to each other are also determining factors in predicting the clockwise or counterclockwise direction of the torque, but become definitive on the post X-ray.

Several considerations may be used to determine or the torque necessary to produce and to correct the ASC include:

- The position of each atlas lateral masses on each condyle.
- The position of each atlas lateral masses on each superior articular surfaces of axis.
- The position of the axis spinous process.
- The opening of closing of the facets.
- And the position of the cervical vertebral bodies.

An atlas that is posterior on the condyle on the opposite

side of laterality requires an inferior torque. Conversely, the atlas that is anterior opposite the side of laterality requires a superior torque. It is easier to correct the loss of the normal relationship of the atlas and condyle opposite the side of laterality because of the first class lever used and the support of the skull. It can be accomplished even if the rotation vector used is not the true rotation on the side of laterality. The movement of the atlas on the condyle on the side of laterality however requires a more specific vector based on it's anteriority or posteriority.

This "true rotation" vector on the side of laterality can be calculated by the change on the post X-ray. The lateral mass opposite the side of laterality will correct easily and leave the true rotation on the side of laterality. For example, when a pre X-ray of a type one misalignment measures an atlas anterior rotation of two degrees and the post X-ray measurement has changed to an anterior measurement of four degrees. The atlas was truly rotated four degrees in relation to the right condyle and was two degrees anterior on the left condyle.

The change of the rotation vector (leaving the height vector the same) to anterior four degrees will complete the correction of the atlas rotation and the axis spinous process in the transverse plane. A second set of post X-rays (both Nasium and Vertex) will show the correction of the axis spinous process to normal. This is accomplished by increasing the mechanical advantage to correct the cervical spine back to the vertical axis when the appropriate line of drive is used on the superior articulating surface of the axis vertebra. This line of drive is determined by the direction of the atlas into the production/reduction pathway of the ASC. The return of the axis spinous process to normal is the best indicator of using the true rotation vector on the side of laterality.

As the forces break the resistance in the facet pathways and through the vertebral bodies it is critical to use the "appropriate torque". The use of the appropriate torque will have a screw in effect returning the rest of the cervical

vertebra to a vertical axis. The use of the wrong torque will have a screw out effect and will either increase some or all of the misalignment factors in an unpredictable manner.

In measurements on post X-rays, the use of the wrong torque will increase the upper angle and the lower angle of a Type one or Type four misalignment. In a Type two misalignment the lower angle will either increase or the relationship of the lower angle to the vertical axis will increase if the wrong torque is used. In a type three misalignment the wrong torque will create a lower angle. There are also cases where the torque may be different for the relationship of the atlas to the skull and the relationship between the atlas and the cervical spine. These misalignments are like having a Type IV misalignment in the saggital plane.

The headpiece does not correct the ASC. The adjuster does! Each headpiece has its advantages and disadvantages. The single support headpiece makes moving the structures easier. The headpiece that stabilizes the head requires more accurate vectors.

Using the single support headpiece and working out the correction has yielded much less predictability for the next adjustment. By determining the final resultant with multiple post X-rays and stabilizing the head in the adjustment the correction becomes more predictable and the recurrence of the ASC also becomes more predictable.

There may be an "original configuration" that will become the final resultant for a particular spine. There may have been more than one injury that has created more than one misalignment with more than one production/reduction pathway. This creates the need for the establishment of a predictable pathway to keep the unstable spine corrected and the need to be able to provide ongoing spinal care without the repetitive use of X-rays on follow up visits. Determining the appropriate height vector, rotation vector and torque for the original configuration of the ASC makes this possible.

Protocol for Adjusting the ASC With the Head Stabilized

by Dr. Robert Brooks, D.C.

In this companion article to Protocol for Biomechanics Using the Multiple Support Headpiece which appears in this issue, Dr. Brooks focuses on the judging the appropriateness of the adjustive vector which he believes maybe more sensitive to error than the adjustive vector used with the single support headpiece. Editor.

“True Rotation” on the side of Laterality

If the rotation of atlas increases on the post X-ray, use the height vector from the pre X-ray and use the larger rotation vector. The condyle opposite the side of laterality will correct first leaving the true rotation of the atlas on the condyle on the side of laterality. The test for the true rotation vector is the return of the axis spinous to normal on the nasium and vertex post X-ray.

- If the rotation of the atlas increases, use the height vector from the pre X-ray and use the larger rotation vector (**only change one vector at a time**).
- If the rotation of the atlas is less, but the spinous of C-2 did not completely correct to normal on the post nasium and vertex; consider taking the smaller rotation.
- If C-2 spinous rotation corrects to “0” it is the correct rotation vector on the side of laterality and all the forces have moved the ASC proportionally.

“Appropriate Torque”

Using the torque that creates the screw out phenomena.

- If the upper and lower angle increase on Type I or Type IV, reverse the torque.

- If the lower angle increases but the upper angle and spinous correct on a Type II, reverse the torque.
- If the lower angle increases but the upper angle and spinous correct on a Type II, reverse the torque.
- If a lower angle is created on a Type III, reverse torque.
- Post X-ray the correction to verify the correction.

There are cases where the relationship between the atlas and the skull requires one direction of torque and the spine below requires the opposite torque:

- If the upper angle, the axis spinous and the rotation correct to normal but the lower angle does not reduce, consider the headpiece placement, use a firm contact and reverse the torque to correct the cervical spine.

The “True Height Vector”

There are times when the first height vector calculated is not the correct height vector and needs to be changed.

- If the upper and lower angle correct and the rotation of atlas and axis correct but the spine does not return to the vertical axis, the height vector may need to be changed to the height vector measured on the corrected post nasium.

Out-of-Pattern Biomechanics II

by Keith E. Denton, D.C.

This out-of pattern misalignment was presented in Atlanta in the spring of 2002 to the advanced doctors by Dr. Keith Denton. Dr. Denton is a Board Certified NUCCA doctor, recipient of the prestigious R. R. Gregory award, and a former editor of The Monograph. Also he has the distinction of having been one of the two NUCCA doctors who worked with R. R. Gregory on a daily basis during the last decade of R. R. Gregory's practice. He is widely appreciated for his expertise in biomechanics, his natural teaching ability, and the quality of care delivered to his patients. Dr. Denton is on the NUCCRA executive board and has an unsurpassed history of effective service to NUCCA. Dr. Denton's understanding of Dr. Gregory's thought process is unequalled among NUCCA doctors; the day by day interaction with R. R. Gregory resulted in the professional qualities that are appreciated by all. The literature shows that no other NUCCA doctor has as high a set of correlations with Dr. Gregory in marking X-rays. The data says it best. Editor.

This article is the second of a series that deals with the unusual or the out-of-pattern misalignment complexes seen by the NUCCA practitioner. The out-of-pattern misalignments became apparent with the development of the vertical axis concept by Ralph R. Gregory, D.C. As Dr. Gregory began to define the four basic type misalignments of the Atlas Subluxation Complex, it was discovered that some of the misalignment patterns would exhibit angle relationships common to a particular basic type, with some biomechanical component not commonly seen with that particular basic pattern.

Many of the out-of-pattern misalignments do have characteristics that can be categorized. Once we began to categorize them, biomechanical correction mechanics can be applied to obtain consistent optimal reductions.

With the unusual or out-of-pattern misalignments, the post x-ray evaluation becomes critical for successful patient care. To achieve maximum stability for the patient the adjuster must decide if any uncorrected portion of the misalignment was a biomechanical or adjusting problem or an expected result. If the problem was biomechanical, was it a problem with headpiece placement or vector selection.

Credit must be given to Albert A. Berti, D.C., of Vancouver, B.C., Canada. Many of the correction mechanics for out-of-pattern misalignments were first presented by him during the NUCCA educational programs in the early to mid-1990's.

When reviewing this misalignment a series of questions and answers have been developed and are used in NUCCA educational programs to assist the adjuster in categorizing

these patterns. As with all Atlas Subluxation Complexes, each must be looked at individually.

Question 1. Name the basic type misalignment. Give the characteristics. Is this misalignment out of pattern or in pattern?

Answer 1.

1. First Basic type out-of-pattern. Contra lateral acute angles, with the plane of C-1 8/16 above horizontal. Angular rotation is into the right opposite frontal plane from an in pattern basic type one. This characteristic creates the out-of-pattern misalignment. The skull has turned away from the side of C-1 laterality and the vertical axis. This is the most common out-of-pattern misalignment. The degree of angular rotation into the right frontal plane and the severe turning of the skull away from the vertical axis are unusual.

Questions 2. & 3. What production mechanics produced C-1 laterality? Over what articular surfaces did C-1 laterality occur? What are the mechanical resistances encountered in correction mechanics of the misalignment?

Answers 2. & 3.

2. This pattern appears unstable with both angular rotation and head tilt into the same frontal plane. It was forced into the right frontal plane. This may have originally been an in-pattern basic type one. C-1's laterality is considered movement over the axial surface, to the left of the occipital condyles of the skull. Angular rotation is no longer considered the cause of C-1 laterality, as described by normal basic type one production mechanics.

3. The primary mechanical resistance is the superior articulating surface of C-2, or the size of the axial surface. The correction of C-1 laterality occurs over this surface.

Question 4. Into which frontal plane has angular rotation misaligned the lower cervical spine? Is there a spinous rotation that must be considered?

Answer 4.

4. Angular rotation is into the right frontal plane, with a moderate rotation of C-2 spinous process. This rotation is to the left of the odontoid and body center numerical values. This rotation is not in the direction of a secondary shift of C-2 in response to its weight bearing function. With the skull turned right three and one half degrees, a secondary shift of C-2 with normal mechanics would probably turn right. The spinous rotation must be considered as a resistance to the return of the lower angle toward the vertical axis.

Question 5. What do you want the effort of the adjustment to accomplish? Do you need to raise or lower the vector from the calculated vector to accomplish this?

Answer 5.

The effort of the adjustment must be designed to move C-1 over the axial surface with out directing the force into the circular pathway of the zygapophyseal on the joints on the left. An inferior torque must be added to the adjustive effort. The adjustor should lower the correction vector to just above the condylar/axial vector for a safe vector. Pre Listing H2 A3.

Question 6. What do you want the reactive force of the headpiece placement to accomplish? Use the schematics and diagrams below to answer the question.

Answer 6.

The reactive force of the headpiece should be placed to turn the skull in a counter clock wise direction, back toward the vertical axis. The three and one half degrees of head tilt is large, and the skull should be supported well above its center of gravity. The square mastoid support would be the best choice. Schematically, slightly above skull position one should be supported on the A location of the headpiece. The tilt of the headpiece is best represented by example A.

Type of mastoid support to be used in each case, why

Round or Square

What portion of the mastoid or skull will be placed on the mastoid support: (1): (2): (3): or (4): (refer to drawing)



What portion of the mastoid or skull (1), (2), (3) or (4) is placed on the mastoid support areas (A): (B): (C): or (D): and why.



Head piece angle to be used in each case:

(A) or (B)

Question 7. Is the post x-ray an acceptable correction? Was there a pattern change on the post x-ray? What needs to be accomplished to improve the post x-ray findings?

Answer 7.

7. The post x-ray indicated a correction of laterality and head tilt that were acceptable. The numerical value of the lower angle changed to a left one and one half. The actual angular rotation into the right frontal plane is closer to the vertical axis. This still constitutes a pattern change of a basic type one out-of-pattern to a basic type two out-of-pattern. The spinous rotation of C-2 improved only 65%. Further lowering of the height vector for the type two pattern is indicated with a caution for spinous rotation. The torque must be increased when lowering the vector. Post Listing H 1/2 A3.

The change in basic types is probably a common occurrence with this pattern. This is probably due to the large degree of angular rotation into the right frontal plane, uncommon even for this pattern. The adjustor would choose to correct laterality over angular rotation when such a mechanical conflict occurs.



Anatometer Record

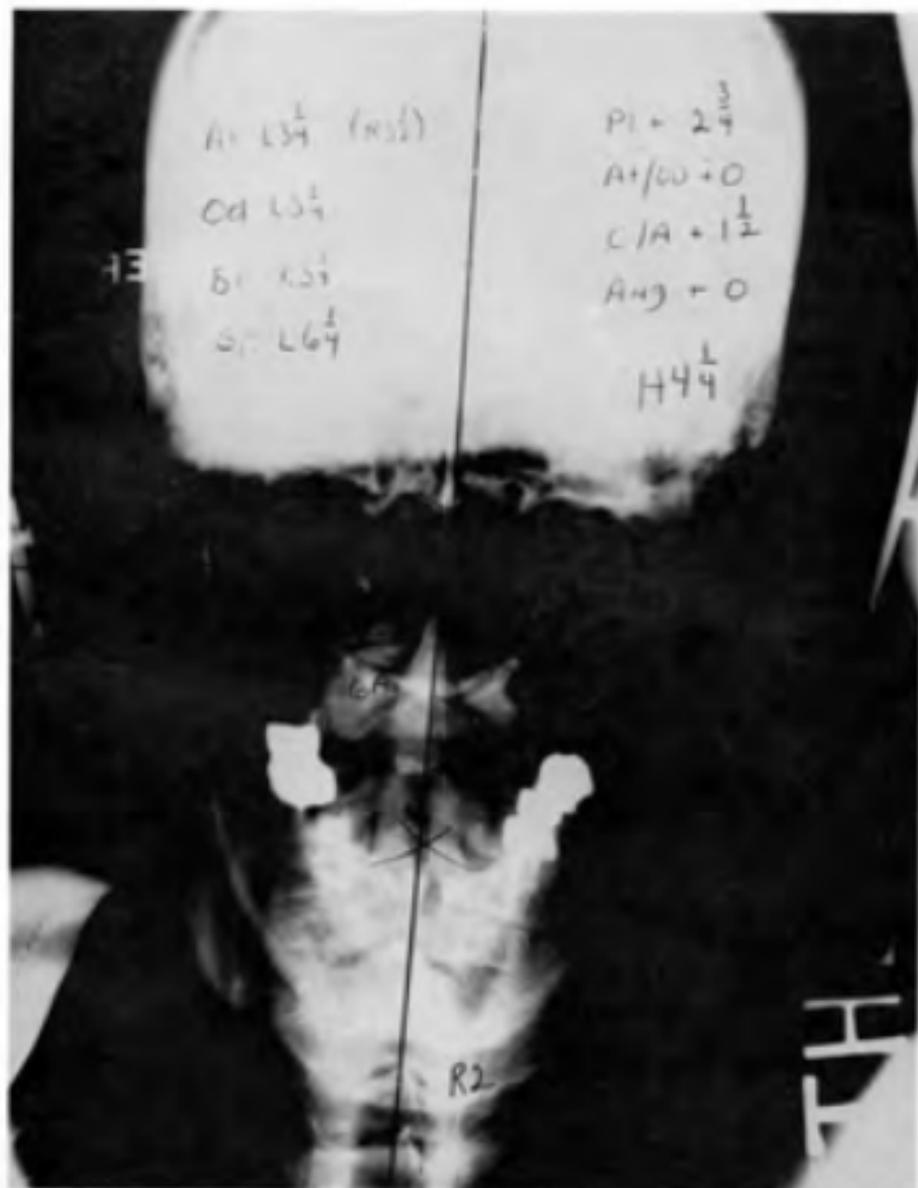
Date	LLI	Front.	Trans.	F.P.	Bal.
LS 1/2	HS	PT	RT	0	0
LS	0	0	0	0	0



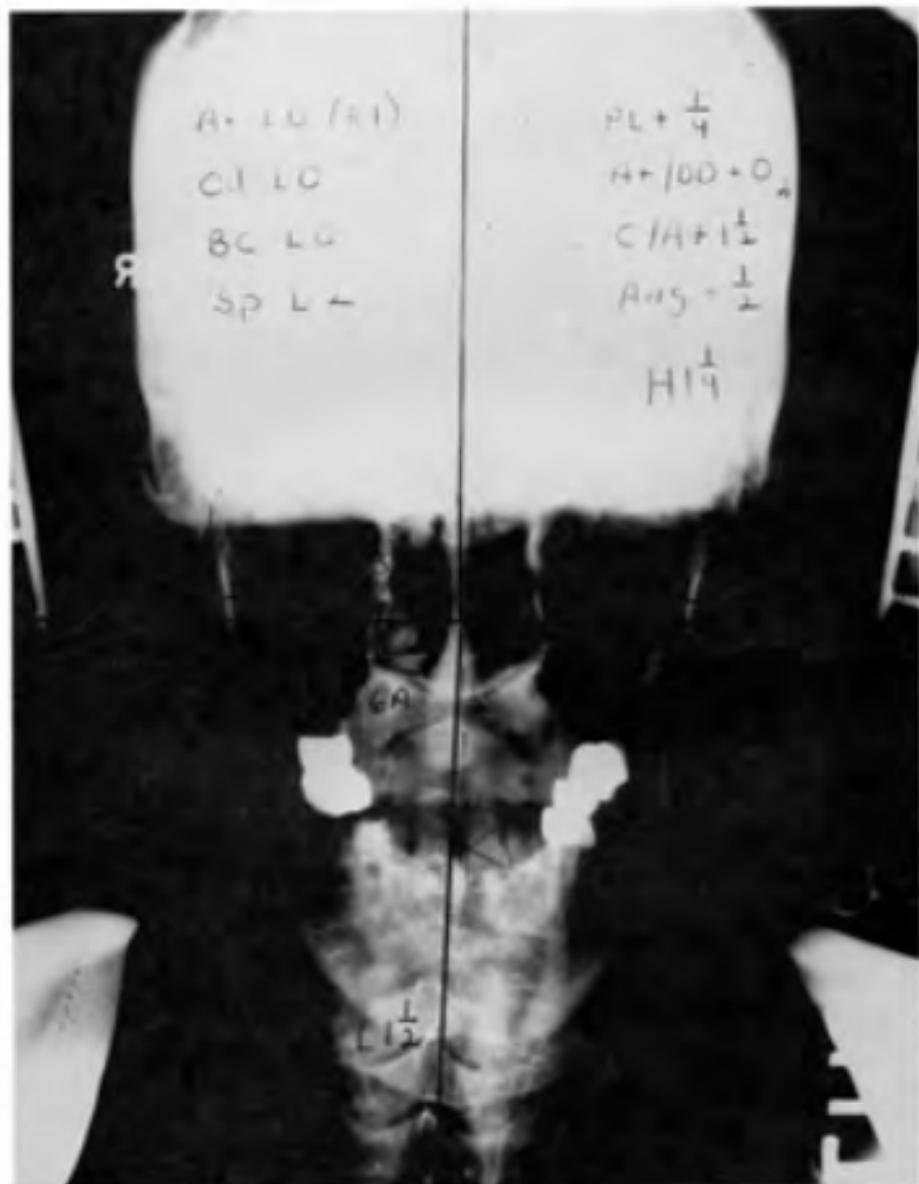
Lateral View



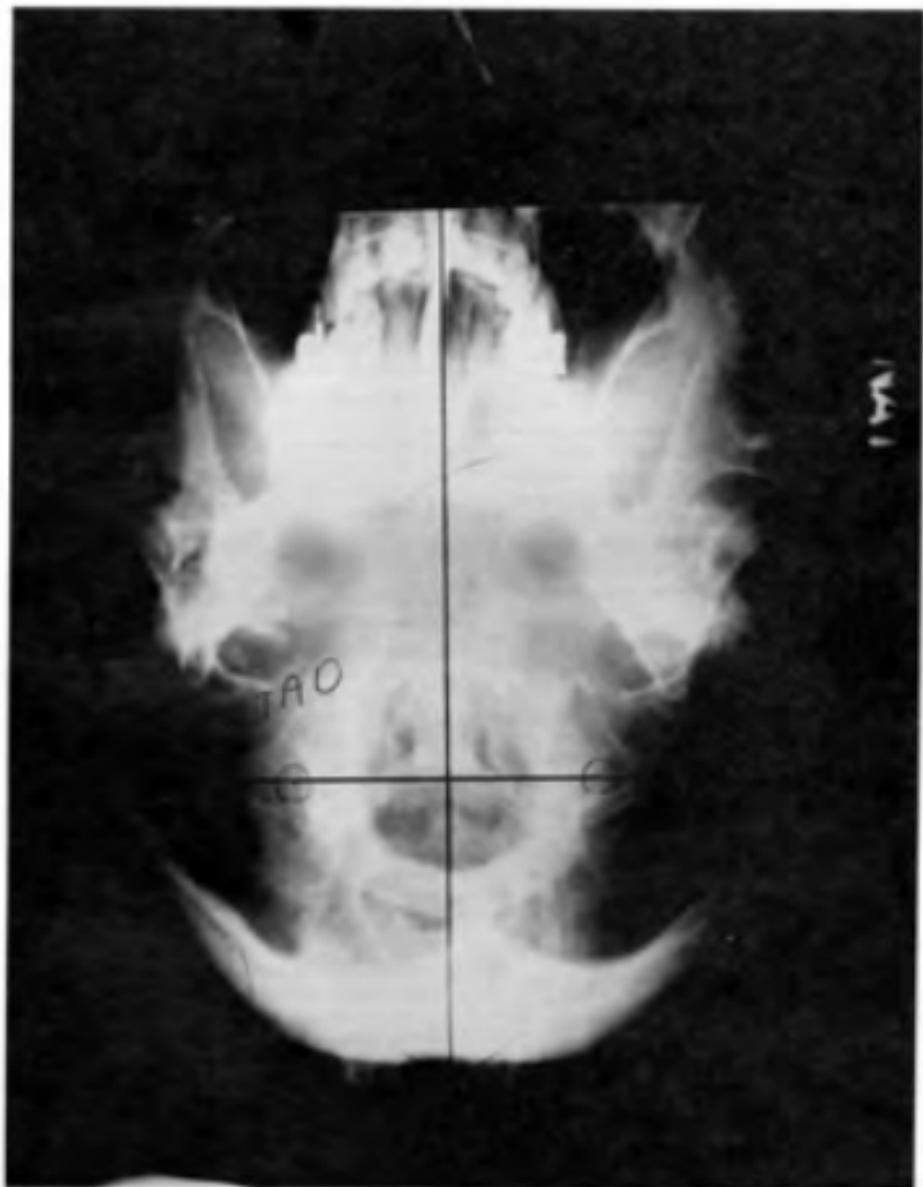
Pre-vertebral View



Pre-Nation



Post-Natal



Panor. views

NUCCA Protocols and Perspectives: A Testbook for the National Upper Cervical Chiropractic Association (2002)

Excerpts from the first two chapters of this excellent text were chosen to give the reader of The Monograph a sense of the historical importance of posture to upper cervical chiropractic and to NUCCA. Dr. Michael Thomas wrote chapter one of the text and co-authored with Dr. D. Gordon Hasick chapter two. Excerpts used are solely at the discretion of the Monograph's Editor. No intent exists to diminish the excellence of this text. Editor

1.10.10 THE ATLAS SUBLUXATION COMPLEX SYNDROME

Chapter 1 - page 50

The evolutionary movement away from a segmental approach, even when the segment was the atlas, was finally becoming mature in the concept of the Atlas Subluxation Complex (ASC) and then as Atlas Subluxation Complex Syndrome. Dr. Gregory had formally defined the concept as a syndrome by 1973. The atlas subluxation was being understood in an expansive context. In 1982, Gregory defined the ASC as:

An atlas that has lost its alignment with the vertical axis in one or more planes, resulting in neuromuscular stresses which in turn produce malalignments of the spine and pelvis and contiguous structures.^[83]

First termed Atlas Subluxation Syndrome, Gregory defined the systemic effects of the ASC by its objective components. Dr. Gregory defined these components in 1973 as:

shown on x-ray, resulting traction of the neurological component, presence of spastic contracture of the lumbar and pelvic musculature, distortion of the pelvic girdle, displacement of the body's center of gravity, contracted leg, and deviation of the spinal segments from the vertical axis of the body.^[84]

By 1982 he referred to it as:

Measurable distortions of the spinal column and subluxated body associated with a C1 subluxation. The physical signs of the C1 subluxation.^[85]

Chapter 1 - pages 56-57

Dr. Gregory often spoke about structural symmetry and asymmetry. In his opinion, asymmetry really couldn't be assessed until maximal reduction of the subluxation was achieved, along with the return of the skull and lower neck to the vertical axis. Structures that often looked to be asymmetrical on the pre-film, measured normally once the

misalignment had been reduced.

That individual segments may have asymmetrical components was also not in contention by Gregory.

Chiropractors point out the extensive incidence of vertebral asymmetry and posit that osseous malformation prevents exact calculation of a normal position. Examination of hundreds of upper cervical x-ray films reveals that contiguous osseous structures, vertebral and skull, tend to adapt to malformation whenever equilibrium is an essential factor. A short condyle, for example, will usually be compensated for by a larger lateral mass on C1 or a built-up superior articulating surface on C2 on the side of the shorter condyle.

Malformed bone structures on the upper cervical spine, therefore, should be evaluated in terms of equilibrium. If the malformation will not cause disequilibrium, osseous adaptation by contiguous structures will usually not be seen to exist. An odontoid process of C2 that is not centered to the body of C2, for example, does not affect equilibrium sufficiently to require contiguous adaptation because it is not a factor in balance. Similarly, a larger lateral mass viewed from A-P on the vertex x-ray film is not compensated for as it does not affect equilibrium.

It is the abnormal movement (misalignment) of the vertebral segment that has been shown to cause neurological detriment; the abnormality of osseous structure does not. One, therefore, does not adjust to remove an abnormality, nor can he. The adjustive force vectors, however, must include both the misalignment distance and the increase in the distance caused by the abnormality which is present prior to the misalignment.^[86]

The symmetry occurs in the multi-segmental picture, in orientation of the entire structure with gravity. Decades of research which clearly showed that restoration of the skeletal elements to the vertical axis also correlated with return of postural symmetry, as well as thermal symmetry, was indisputable to Gregory.

Gregory had the courage of his convictions. He attracted students who could examine the ideas he presented in a deep manner and see the truth for themselves. NUCCA has long been populated by strong individuals with tremendous intellectual talents. Yet Dr. Gregory still humbled us all with his honest hunger for truth and his relentless obsession with uncovering it. NUCCA has never been an easy place for the egotist. In past years, Gregory could be blunt, direct, and to the point. To stand with him was to stand in his fire. Even in the years since, the standard set by Gregory has continued to humble practitioners. As Gregory often said, "Practice doesn't make perfect. Perfect practice makes perfect."

Chapter 2 - pages 8-9

What the NUCCA procedure can offer is a way to:

1. Correct body imbalance to relieve stress on the spinal column and nervous system.
2. Help the spinal column stay corrected.
3. Enhance awareness of spinal care for the patient, both corrective and preventive.

What is possible for the patient to gain from this care is:

1. Relief from their problem.
2. Complete recovery over time.
3. Regained stability and function.

NUCCA has helped thousands of people of all ages regain and maintain their health throughout their lifetime. This method offers a conservative approach to healing that is specific to that person and works to enhance the body's own ability to be well.

When it comes to understanding neurological function and neurophysiology we still need further progress in our ability to measure change. With better tools for evaluating neurological structure and function we will begin to understand why the NUCCA work has become so successful in being a catalyst for positive change in the healing process of individuals. A well-known quote among mathematicians states "We know more than we can prove." I believe this statement is true when we look at why the correction of the ASC utilizing the NUCCA procedure consistently provides phenomenal results for many thousands of patients. As we learn more, it is our hope as an organization, to provide future generations with an improved quality of life by offering spinal care with a higher degree of accuracy.

2.4 GRAVITATIONAL TRAUMA

Sixty years of empirical investigation by Grostic and NUCCRA has clarified the role of the ASC in triggering neurological imbalance, unilateral spastic contracture of the paraspinal musculature, distortion of the pelvic girdle, and the cause of functional leg length inequality (clinically

referred to as the "short leg"). The subsequent correction of the objective misalignments in the upper cervical region has correlated time and time again with return to balance.^[25] The measurable outcome parameters include orthogonally based post-film analysis of the upper cervical region,^[26,27] return to normal and symmetry in paraspinal EMG measurements,^[28,29] return to bilateral weight balance,^[30,31] significant decrease in abnormal excursion of the pelvis in the "neutral" standing position in both the frontal and transverse planes,^[32] return of the T1 spinous (and hence, the entire spine and skull) to the vertical axis (referencing the center of the pelvis in the frontal plane).^[33,34,35,36,37]

We are not the only discipline to notice the deleterious effects of postural misalignment with respect to gravity. Of some considerable interest is the work of a Harvard researcher, Joel E. Goldthwait at the beginning of the last century. Ultimately ignored by his peers, he was a surgeon who:

noticed that abdominal nerves and blood vessels are under tension in individuals whose bodies are out of alignment.

He also reported "stretching and kinking" of the cerebral arteries and veins in those whose necks were bent. Various cardiac problems were correlated with "faulty body mechanics" that distorted the chest cavity in a way that impaired circulatory efficiency.

Goldthwait also documented with x-rays a build-up of calcium deposits around the vertebrae of individuals with chronic arthritis, and observed that these deposits can diminish when the individual acquires a more vertical stance . . . He viewed the human body from a mechanical engineering perspective, in which alignment of parts is essential to reduce wear and stress.^[38]

In Goldthwait's own words from papers published in 1909 and 1911 (and reproduced by Oshman), he makes a clear statement about the vital nature of gravity in relation to structure and function.

The way we hold and move our bodies in our daily activities is more important than most people realize. It is desirable to be able to stand erect and to have the parts of the body balanced so that easy and graceful movement occur. These ideas about how we stand and move are important for full health and economic efficiency of the body. The most economical way to use the body is with proper poise. This allows more energy to be available for whatever task is required. Any time a structure departs from the balance state, energy is wasted and efficiency is reduced. An imbalance can cause one part of the body to be strained more than another, but no one part can be strained without affecting the whole body. It would seem to be a matter simply of common sense to expect better health with the body so poised or

balanced that all of the organs are in their proper positions and the muscles are in proper balance. Likewise with the poise such that the viscera of both the abdomen and thorax must be out of place, as can easily be demonstrated with x-rays, the best health could hardly be expected. The malposition of an organ will disturb its function. If malposition continues long enough, permanent damage will result, but if the faculty mechanics is corrected, damage will be prevented. ^[39,40]

There have been other lone voices in medicine who have examined the effects of postural misalignment. Oshman mentions Strait, et al, ^[41] and Hellebrandt and Franseen ^[42] as particularly cogent. Medicine as a whole however, continues to ignore this perspective. Bodywork therapies such as Rolfing, Alexander Method and others, continue to investigate these gravital issues from a therapeutic point of view.

Chapter 2 - page 13

There appears to be a direct correlation between correction of the ASC and improved brain stem function. This improved function is seen clinically to influence a variety of levels of the human physiology. As J. Lennon, N. Shealy, et al., reported.

In terms of body mechanics, [quoting Bunch —ed.] "Posture is more fully defined in terms of body mechanics as the interrelationship between muscle and the skeletal tissue of the body." As Bunch states, "For many years physiologists have shown that the position of the head on the neck is vital because it governs all postural reflexes. If the head is misaligned, other parts of the body move in and out of line to maintain balance and thus energy is expended to counteract the effects of gravity." ^[50]

These researchers relate the influence of spinal imbalance on everything from breathing to thinking.

Indeed, they point out:

Observations of the striking influence of postural mechanics on function and symptomatology have led to our hypothesis that posture affects and moderates every physiologic function from breathing to hormonal production. Spinal pain, headache, mood, blood pressure, pulse, and lung capacity are among the functions most easily influenced by posture. The most significant influences of posture are upon respiration, oxygenation, and sympathetic function. Ultimately, it appears that homeostasis and autonomic regulation are intimately connected with posture. The corollary of these observations is that many symptoms, including pain, may be moderated or eliminated by improved posture.

... In summary, the focal stress of spinal misalignment leads to muscle tension, hyperaesthesia, altered circulation, and a wide variety of visceral illnesses generally associated with stress. ^[6,10]

Anecdotal evidence abounds regarding the potential beneficial effects of upper cervical chiropractic adjustments on a variety of problems. A partial list of case reports collected by Dr. Kirk Eriksen in his text, The Occipito-Atlanto-Axial Subluxation Complex – A Review of the Scientific Literature (2000) is amazing in its diversity. Included are case reports involving the following: herniated disc in the cervical spine, torticollis, brachial neuralgia, improvement in cervical lordosis, headaches (migraine and tension), TMJ, post surgical low back pain, multiple herniated discs in the lumbar spine, juvenile idiopathic scoliosis, knee pain, epilepsy, myoclonic seizures, improvement in mental function, Bell's palsy, multiple sclerosis, Tourette's, cerebral palsy, reflex sympathetic dystrophy, autism, hyperactivity, Attention Deficit Disorder, chronic fatigue syndrome, recurrent otitis media, Meniere's disease, suppurative skin disorders, asthma, constipation, indigestion, irritable bowel disorder, hepatocellular carcinoma.

The Upper Cervical Chiropractic Diplomate Program

Report on Session 1 of The Upper Cervical Diplomate Program
Atlanta, Georgia; September 8 & 9, 2001

"Module #2"

by Dr. Michael Thomas, D.C.

Dr. Thomas, a member of the NUCCRB Board, has been "commissioned" by the NUCCRB Board to provide the readership of The Monograph with reports on The Upper Cervical Diplomate Program, a joint effort of Sherman College of Straight Chiropractic and the Academy of the Upper Cervical Chiropractic Organizations (AUCCO). What follows are Dr. Thomas' impressions of what transpired. Fall Diplomate program information can be found on the official NUCCA website. Editor.

Session 1: Neurological Integration

The first class for the Upper Cervical Diplomate Program began in Atlanta, September 8th and 9th, 2001. The initial section was entitled "Neurology and the Chiropractic Adjustment". It was instructed by Dan Murphy, D.C., and consisted of twelve hours of lecture. Core concepts included neurophysiology relating to the vertebral subluxation, neurological rationale underlying the adjustment, examination of mechanoreceptors and spinal cord reflexes, placement of chiropractic in systemic health and neurology, and integration of mechanical and visceral neurology.

Dr. Murphy was, as always, able to present complex issues in a clear and compelling manner. He began his talk with an overview of ideas regarding the mechanism of how subluxation causes (and conversely, how the adjustment corrects) nervous interference. His list included:

- *Pressure on the brainstem (also known as 'foot on the hose') which he noted may occur in about one percent of patients. He did not spend time on this idea.

- *Altered Cerebrospinal Fluid flow. He admitted he wasn't very knowledgeable about this idea and would not spend much time on it either. This is an osteopathic model.

- *Tethering (traction) of the pons-medulla-cord tract. Dr. Murphy noted that this idea is prevalent in upper cervical circles, but that he wouldn't spend much time on it.

- *Local dysafferentation of the monosynaptic input to the (a.) vestibular nucleus, (b.) cerebellum, and (c.) trigeminocervical nucleus. This is the predominant idea today and is backed up by a tremendous amount of published research. He noted that this is where he would spend most of his lecture time.

- *Altered Center of Gravity- Systemic. By this, Dr. Murphy referred to dysafferentation from asymmetrical vertical gravity stress on muscles, joints, skin, etc. and to the spinal cord and subsequently to the cerebellar-thalamo-cortical loops of life. He further explained this as alteration of genetic expression as a consequence of piezoelectricity, streaming potentials, and other electrical semiconduction potentials, and as a consequence of biomechanical

alteration of the tensegrous integrin matrix. He noted that he would discuss these concepts a bit because of their obvious relation to upper cervical chiropractic.

There is really no way to delve deeply into the details of the twelve hours of lecture without writing an entire book. I think that what is important is to briefly discuss the focus of the session and the perspectives which were put forth.

The ideas concerning neurology and the subluxation of Grosic and Gregory are virtually unknown in Chiropractic at large and certainly in medical research at large. None of these ideas have ever been thoroughly discussed in any recognized (i.e., peer reviewed and indexed) journal. This said, a deep examination of the accepted literature in neurology will obviously not discuss these views. Dr. Murphy has done exhaustive investigation of the literature in a wide spectrum of journals. He has been able to validate many chiropractic concepts and perspectives through the uncovering of this varied literature. The primary importance of the nervous system in maintaining health is overriding in the literature. Murphy repeatedly emphasized the importance of recognizing that gravity is the most potent physical influence in any human life. Altered center of gravity has far-reaching consequences. Joint integrity and alignment in a gravity environment are critical to normal function. This reaches far beyond the musculoskeletal system but to all visceral functions too. Changing the way people exist in a gravity environment changes afferentation. The number one load to the brain is from the muscle spindles.

Murphy noted that some of this information may not be 'heard' easily. He offered volumes of research showing that alteration of afferentation (sensory input) fundamentally alters function of the organism. He averred that instead of "above-down and inside-out", the model developing was indeed the reverse. He likened it to the computer model of "garbage in-garbage out".

Murphy also outlined the basic model that has developed in the Neurology Diplomate program. Their model is based on the idea of asymmetrical cerebral dominance. Adjustment for them is predicated on ascertaining which hemisphere is dominant and adjusting on one side to

equalize dominance. The adjustment (in these cases quite nonspecific manipulative efforts) is thought to inhibit the sympathetic nervous system on the side adjusted. Dr. Carrick, the prime investigator of this approach has apparently brought quite a number of individuals immediately out of chronic coma states through this idea and technique. The point here is that the neurology diplomates consider it vital to adjust on 'the proper side'. They determine the appropriate side to adjust on through various tests that indicate asymmetrical cerebral dominance. Remarkable results are being obtained in many different protocols.

The overall sense that I had of the class was that the literature validates the vital position that the upper cervical region plays in maintenance of health. The deleterious effects of postural misalignment are clearly displayed in the medical literature. The restorative results of effecting a return to normal posture in a gravity environment are therefore implicit, though nothing in the literature suggests

a way to consistently do this. Apparently the best answer in the literature at this time is the one developed by Carrick. There is no validation at this time for the specificity we now utilize although frankly, there is no sense that restoration of postural alignment is possible through adjustment of the upper cervical structures at all. We are not represented in any way in the accepted literature. So the class was not a refutation of our models. It was rather, an update on the increasing understanding that medical research has for the importance of the upper cervical region in the maintenance of health and acknowledgement of the importance of viewing the organism within the context of a gravity environment.

The next session of the diplomate program will be in October and consists of attending the Vertebral Subluxation Research conference being held at Sherman. The idea here is to become aware of the papers being presented and also the methods being applied to investigation and research in our own field.

Report on Session 2 of The Upper Cervical Diplomate Program Held In Conjunction With the Ninth Annual Vertebral Subluxation Research Conference, Sherman College of Straight Chiropractic (Spartanburg, South Carolina) October 13 & 14, 2001

by Dr. Michael Thomas, D.C.

I attended the second session of the diplomate program in October. This session consisted of attendance at the Vertebral Subluxation Conference. The idea is to expose the participants to the research currently being conducted and to give participants an idea of how to conduct their own investigations.

The conference was being conducted in conjunction with the Second Annual Conference for Philosophy in Chiropractic. Because attendance was encouraged between the two sessions, a number of the Philosophy attendees sat in on some of the presentations made in the Subluxation conference. I perceived a common thread among the philosophers and many of the Sherman students who participated in the proceedings. The idea that intention is the only critical issue in the adjustment was being promulgated among many people. This seems to harken back to the Palmer ideas of universal and innate intelligence. There seems to be an uncritical sense that any intervention made with proper intent will have positive outcomes. One participant in the Vertebral Subluxation conference, Dr. Gary Knutson, made several comments regarding this fallacious idea and mentioned a paper he had written regarding the iatrogenesis that can occur when maladjustment is made. He told of several cases in which he had inadvertently misanalyzed patients and the deleterious outcomes that followed regardless of his good

intent. This is remedial in our model but was controversial at the conference. His paper can be found at:

<http://www.members.aol.com/gaknutson/Errors.html>

Dr. Knutson remarked that he had taken on a lot of grief with the publication of this paper. It is not an idea that is met with agreement by many so called 'subluxation based' practitioners.

Dr. Ed Owens opened the conference with an overview of the weekend. A summary of the papers presented can be found at:

<http://www.Sherman.edu/research/index/html>

Susan Brown, PhD., D.C., made the first presentation. Her presentation was entitled, "An Investigator's Guide to the Institutional Review Board." The NUCCRA board examined issues pertaining to the IRB a year ago and at that time decided to table the discussion because Life University was currently in transition regarding their IRB. It was decided to not try and 'reinvent the wheel' so to speak. This presentation reminded me of the issue and Dr. Brown's presentation made it clear that it is an urgent topic and one that we can no longer ignore.

The Institutional Review Board aka Human Subjects Committee is charged with the protection of human subjects in research projects. The need for such a process came about

after examination of horrific incidents in the past including the Nazi atrocities uncovered at the Nuremberg Trials. Also mentioned was the Tuskegee syphilis research in which a number of individuals were infected with syphilis and then left untreated to live out their lives manifesting the increasing debilitation that manifests with later stages of syphilis. Investigators recorded the resulting deterioration without ever informing the unwitting participants that they had been infected.

The IRB process is undertaken prior to initiation of the study. The researcher is not seen as the best person to look at all the facets regarding risk because of their interest in conducting the study in the first place. The IRB provides an unbiased group that can assess all the components in an objective way. While the primary purpose of the IRB is to protect human subjects, they also examine the scientific merit of the proposed study. They look at the science involved to ascertain if the benefit to knowledge is worth the risk to the subjects involved. They examine the inclusion/exclusion criteria. The study design is examined, as are the specific procedures to be used. The statistical analysis to be used is examined to be sure it is accurate and adequate to measure the outcome. Possible coercion of subjects is explored and this is a subtle issue at times.

Beyond the initial review of the study, the IRB also examines subject confidentiality, documentation of the study, compliance with the protocols, adverse event reviewing, and requires ongoing progress reports from the investigator.

This sounds like a lot of work for the investigator and unfortunately, it is. Some studies, such as retrospective records reviews require only expedited review and isn't very complicated. Use of x-ray with human subjects however, in a prospective study will require a more thorough examination by the IRB. Dr. Brown did mention to me that it is wise to use an IRB that is centered at a chiropractic institution because they will be much more amenable to our protocols and our concepts. An IRB from a University for example, will generally be medically based and use of pre and post film analysis can be problematic.

Palmer and Life both have IRBs that may be of help to us.

So why do we want to go to the hassle of going through IRB review? The answer is that more and more, publication in the 'upper level' journals require it. JMPT is the only journal in the chiropractic profession that is indexed in Index Medicus and therefore that only journal in our profession that shows up on Medline. This means that researchers the world over can type in certain keywords and obtain abstracts of papers which have been published in JMPT. Virtually every other journal in chiropractic remains invisible to the scientific world at large. There are several chiropractic databases (ie: CINAHL, MANTIS, ICL, etc.) but they are not used by the research world outside of chiropractic.

Nothing that we have published, outside of JMPT (or non-chiropractic peer-reviewed, indexed Journals such as Manual Medicine, Spine, etc.) is available to the scientific world at large. If we want to ever be recognized beyond our own profession (and even by most of them!) we need to begin to publish our information in places where the world can even find it.

This is a serious matter and future research must be undertaken in the proper way. Jim Palmer, as our director of research, is able to shepherd this process for us. In addition, it is vital to have IRB is we want to apply for to any granting agencies for funds for future investigations.

I did have a couple of conversations with Anthony Rosner, PhD from the FCER. He was very amenable to discussion regarding grant proposals from NUCCA. I told him that in the past that the FCER had appeared to dismiss orthogonally based upper cervical work, out of hand. He assured me that it would not be in the future and to contact him as appropriate. This could become a significant help to us if we begin to move in this direction.

The next session of the Diplomate program is was held again at Sherman in November (2001). It covered anatomy and had a dissection lab. I will not be able to attend this session however it will be available on videotape in the Spring (2002) and I will report on it then.

Subject Head-Clamp Placement for Vertex Film and a Proposed New Method for Measuring Atlas Rotation

by Marshall Dickholtz, Sr., D.C.

This is the first of three articles by Dr. Marshall Dickholtz, Sr., in this issue. All three articles are focused on helping chiropractors along the path of continuous improvement in their practice. Editor.

With a better head-clamp placement for the vertex films, there is more consistency when centering the entire head including the base of the occiput on both pre and post X-Ray films. Assuming that a chin centering unit and a mirror which is in the center of the grid carrier is used, then the glabella should be centered to the line in the mirror. Accuracy can be measured by comparing the odontoid on the two vertex films in relationship to the vertical lead center-line. If there is not consistency in duplication to within one to two millimeters for comparison purposes, then there will be errors in the measurement of atlas rotation.

The odontoid will move as the atlas laterality is being reduced. This movement will be one millimeter for every one and one half degrees of reduced atlas laterality on a three inch condular circle. This movement must be considered when comparing vertex films to know the consistency of X-Rays.

For improved head-clamp placement when taking vertex films, I recommend that the head be clamped very low and posterior on the occiput. This is a longer triangle than what has been traditionally used and consequently will lead to a greater consistency in measurement of atlas rotation. This improved head -clamp placement has been approved by the NUCCRA Board.

If the lower cervicals on the vertex film are approximately in the same position as they are on the nasal film, then you can be sure that the occiput has not been pressured off its centering positions by the head-clamp. With the proper centering of the head you can measure the rotation of the atlas in the transverse plain in relationship to the whole skull.

During the last year I have noticed that the odontoid on

the vertex films is not where I would expect them to be when the films are taken correctly. In fact there are occasions in which the whole odontoid is off to the right or left of the vertical center-line. This means that the foramen magnum is not always in the center of the occiput and consequently is not aligned to the crista galli of the cribiform plate. So therefore using the one point which was brought over from the nasal film, by using the odontoid for reference, to the vertex film is not always correct. We need another way to measure rotation.

The remedy, as I see it, is to find another line that would be more correct. At the present time I strongly believe that once the head, glabella, neck, shoulders and head clamp are correctly placed; then the rotation of the atlas should be measured in relationship to the line bisecting the whole head, i.e., the lead vertical center-line on the grid carrier. In fact any vertical line on the grid carrier would be satisfactory. Look at your old x-rays and see if some of the reductions would be more complete if they were measured with this new information. Also, look at some of the x-rays of patients that were a problem case and see if the rotation vectors could or should be changed with this new way of measuring.

Also, the line that bisects the atlas may not go through the transverse foraminae, but should bisect each of the lateral masses. The variable vertex square is used for this division.

The caveat here is that the vertex films had to be taken correctly. Look at more than one vertex film and compare consistency in all aspects.

The methodology has been used by five chiropractors, (two are certified) for two years.

(I will be putting statistics and x-ray films together to be presented to the N.U.C.C.A. board in the near future.)

Lead Markers for More Accurate Interpretation of Cervical X-Rays

by Marshall Dickholtz, Sr., D.C.

In the past (Monograph Vol. 5, No. 3; April 1993, pp. 16-18) I have presented the idea of lead markers being placed on patients to be X-Rayed. In summary, using birdshot taped to the anterior inferior tips of the palatable tips of the mastoids helps in locating the desired atlas transverse process in relationship to the mastoid. On the X-Rays there is a twenty percent (20%) magnification factor that has to be taken into account along the S-line projection in the relationship of the mastoid to the transverse process, depending on the angle of the nasal view. When X-Raying at a higher angle than S-zero, the atlas transverse process will appear to rise higher in the film relative to the mastoid. This effect can be allowed for by taking 1/32 of an inch for every S-line number above S-zero. Using this information it is easy to locate the contact of the atlas transverse.

A flattened bird shot or about 0.020 inch of lead by 3-4 mm square taped to the inferior tips of the ear lobes will identify the level of the ear lobes on the nasal film. This should be consistent with how the ear lobes appear as the patient was standing in front of a wall chart with horizontal lines. The subluxation is best represented while the patient is standing.

My latest addition to this process is to simply tape birdshot to the glabella. This may require opening a slit in the vertex filter to show its shadow on the film in its position to the vertical lead centerline image on the film. There is about a 25 percent magnification factor in this object to centerline. Advantages to this procedure include 1) enabling the doctor to have a point to align to when taking the vertex film, 2) showing any error in taking of the film, and 3) showing any discrepancy; that the cribriform plate and the nasal shadow is directly aligned to the glabella.

On the nasal film, this marker will show how accurate the glabella was aligned to the alignment rod when looking at the marker in relationship to the lead vertical centerline. If the nasal film does not look symmetrical and the film has to be retaken, then you know whether it was the error in taking of the film or whether it was in the relationship of the glabella to the facial features. Also, by taking into account how the first film was taken, you now know how to align the glabella to the alignment rod on the next pre or future nasal films. If the glabella is not in the center of the head, then this fact should be marked on the patient's card for future exposures.

What I Do On BASIC Type II Cases

by Marshall Dickholtz, Sr., D.C.

NUCCRA President

When analyzing a nasal film, it has been taught at the seminars that on Basic Types II, III, and IV to subtract one half inch from the height vector for every degree that the head is turned into the side of laterality. When this was first taught at the seminars, I emphasized that on Basic Type II the lower cervical angle had to be factored into the calculus. Attention must be paid to both head and lower cervical angle because of the many ways for distortion to exist.

The basic teaching is that all misalignments should be reduced proportionately with part of the adjustive process being to get the cervical spine to the vertical axis on all Basic Types. The purpose of this paper is to add a modified accounting system for supporting the head, I have been using this system for many years with good predictability and results. The system is as follows:

As to NUCCA doctors subtracting one-half of an inch for head tilt, I subtract one-half of an inch from the height vector for every degree that the cervicals are off the vertical axis on Type II. There are a few exceptions to this rule.

1. When the atlas laterality is more than three degrees.

2. A Toricollis condition (Wryneck) exists.

Explanation: Going too low in this type of case results in the atlas hitting the condyles instead of getting under them.

3. If there is a chance (depending on the chiropractor's ability) laterality may not be reduced completely but the lower cervicals change to a greater degree than laterality.

Part of the Solution: On Basic Type II, III, and IV use a round headpiece. If the head tilt is equal to or more than laterality, then the mastoid should be braced at its very tip. This will enable the weight of the head to help bring it back to the vertical axis. Now to understand the rest of the formula as to where to brace the head: If the head tilt is less than laterality, then use a percentage. For example, if the head tilt off the vertical axis is one degree and the atlas laterality is two degrees, then brace the head on the round head support 50% down from its center of gravity to the palpable tip of the mastoid.

Address to the 1969 NUCCA Convention

by R. R. Gregory, D.C.

No issue of The Upper Cervical Monograph would be complete without looking at the past. The past and the present allow us to define the "arrow of time" in the NUCCA organization. This address focuses on the "aims and objectives" of NUCCA.
Editor.

INTRODUCTION:

Today I am to speak to you of the aims and objectives of the National Upper Cervical Chiropractic Association, Inc. There is no reason for another organization or voice unless it satisfies a need, offers solutions for unsolved problems. We believe that there are many unsatisfied needs and unsolved problems in chiropractic, and today I would like to discuss some of them with you; to go over with you some of the unsolved problems that exist currently in chiropractic, and to give you NUCCA's analysis of these problems.

Because of the grave situation which the profession finds itself in this year of 1969, I think we must discuss facts.

The voices that speak for chiropractic are many and they are diverse. They are also contradictory. NUCCA also has a voice, and it is a voice that pleads for reason; for a solution to our problems, professional as well as technical; and for a sound scientific foundation upon which to build a profession that can survive separate and distinct and as an acceptable science. NUCCA's voice is one that appeals for professional unity on the basis of the restoration of the vertebral subluxation and its role in the cause of disease; it is a voice that prays that the essential nature of chiropractic will be given a chance through scientific research in order that its validity and its effectiveness may be determined; it is a voice that requests that chiropractic may become sufficiently scientific that men of reason in our national and state legislative halls will afford it equal opportunity with other healing arts in their deliberations; it is a voice that entreats for professional maturity; last but not least, it is a voice that raises in defense of the right of humanity to be protected from the unsound practices of our day (for those practices exist in all healing arts) and it is time that chiropractic returned some of the criticism it has been receiving.

NUCCA is predicated upon the proposition that the vertebral subluxation is the essential nature of chiropractic, and is what chiropractic is all about, and that the vertebral subluxation as a concept has never been subjected to scientific scrutiny; therefore, its potential as a causative factor has never been scientifically determined and its reduction as a curative factor never scientifically established.

In spite of this situation, or perhaps because of it, the majority of chiropractors have rejected the vertebral subluxation; and, if we are honest with ourselves, we must admit that another large faction have professed it in name

only and rejected it in practice. The tragedy of this fact is that too few who profess the subluxation know what to do with it; they have never been taught how to properly manage the subluxation.

Because of the unwillingness or inability of any chiropractic institution or organization to scientifically test the vertebral subluxation and its detrimental effect upon the human organism; and the result of its reduction upon the human organism, NUCCA adopted a policy statement to the effect that chiropractic is predicated on the restoration principle inclusive of all technics that reduce the misalignment factors of the subluxation and which are based upon specific and acceptable principles of subluxation reduction.

The specific and acceptable principles of subluxation reduction are those principles which all sciences use to resolve problems and include those principles which have been used as tools in problem-solving since their discovery. These principles, of which many are applicable and relevant to our unsolved problems, are found in the fields of mathematics, physics, kinesiology, cybernetics and the like. The application of these principles to the unsolved problems we face will make for solutions that will be acceptable to the scientific community.

Scientific truth is scientific truth and that which is truth in physics or in mathematics cannot be false in chiropractic. This, then, insures a basis for truth in chiropractic, and this can be done if this profession, or enough of it, wills it, works at it and supports it.

This NUCCA policy statement, therefore, indicates recognition of the fact that it has never been established scientifically where the subluxation, or subluxations, exists whether in the dorsal, lumbar or cervical area but the policy statement does incorporate the propositions.

1. that vertebral subluxations do exist.
2. that their existence and correction is the essential nature of chiropractic.
3. that the restoration to normal of the subluxed vertebra is the objective of the adjustment.
4. that there is a normal.
5. that there are scientifically acceptable principles that would and do apply to subluxation reduction.
6. that there are procedures of attempted correction in use today that are not acceptable and detrimental to those to whom they are applied.

7. that the production and reduction of the vertebral subluxation is susceptible to scientific testing.
8. that it is the moral duty of the profession to prove or to disapprove the vertebral subluxation and its effects upon the organism.
9. that the neurological component can be involved in several ways that are detrimental to it.

All chiropractic authorities are and have been in agreement that a subluxated vertebra by definition includes movement of the vertebra from its normal position into an abnormal position involving more than one plane of motion. These abnormal positions are the misalignment factors of the vertebral subluxation, and are susceptible of accurate measurement. To this extent chiropractic can be an exact science and as exact as the measurement involved.

Thus the logical starting point for the resolution of the problems of the subluxation are the consideration of normal and abnormal vertebral movement. As the problems are solved re normal and abnormal vertebral movement we are able to better comprehend what actually happens to the neurological component, and it is not necessarily a reduction or blockage of a nerve impulse flow, or a brain cell to tissue cell reduction in nervous conduction. There are many aspects to involvement of the neurological component, and what actually happens in some cases may come as a shock to those who feel that the science of chiropractic is a completed thing and a closed book.

All of my professional life I have heard it said and seen in print that chiropractic is a simple thing; that all the doctor needs to do is to locate a subluxation and make an adjustment and in some miraculous manner the vertebra is returned to normal, the patient gets well, the doctor collects his fee and life goes on as usual. We keep hearing about this simple principle.

It is a source of amazement, to me at least, that this over-simplification of the application of force vectors to the vertebral subluxation can continue on year after year, increasing vertebral subluxations or at least not decreasing misalignment factors, and no one seems interested enough to find out why.

One well-known chiropractic educator recently expressed the idea that it makes little difference what technic one uses to adjust a vertebra and that the doctor should use the technic that works at that particular time. How little must be the understanding to make sure such a statement.

Something is wrong. The letters and calls for help which I almost daily receive from fellow practitioners, the referred patients and the problem cases within my own practice tell me that chiropractic is not a simple thing and there is no magic switch that can be turned on. When people travel thousands of miles to get an accurate adjustment for a

vertebral subluxation because such cannot be obtained in their home location, it cannot be a simple matter and it shows that there is a general lack of knowledge re the vertebral subluxation, and perhaps, a lack of interest.

When we look at the situation in our colleges concerning vertebral subluxation reduction we begin to understand why. No one seems to know what to do about vertebral subluxations that have any degree of complexity except to refer to them as simple.

And I see referred cases upon whom chiropractors and osteopaths have applied their simple art, and I am constantly amazed at the consequences - terrible consequences - of the over simplified practice of this art; and I am fearful for the future of this profession. I am fearful for the reason that this negligent and over-simplified practice of a complex science and art can destroy us. This constitutes a more deadly and powerful argument against us than any found in the H.E.W. report, and this is so because it is an argument which can be physically demonstrated before legislative committees and the like. It is an unanswerable argument, and it hangs like the sword of Damocles over our heads waiting until some segment of society, legal, legislative or medical, becomes aware of our ignorance and/or our lack of interest and attacks us with logical and scientific arguments which cannot be refuted.

If you think that I am exaggerating this danger to our survival, let me assure you that I am not. It is being discussed today within legal circles. The idea that an adjustment can do no harm is erroneous; the idea that an adjustment need not be controlled or predetermined is wrong; the concept that any adjustment or manipulative movement applied in violation of mechanical principles will result in good and not in harm is as wrong as it can be; the erroneous principle that some vitalistic force will correct all errors inherent in the adjustive process must be abandoned. There is abundant proof to the contrary, and it is growing. It presents a clear and present danger to this profession. We need only to await a Ralph Nader to organize the opposition. As long as we persist in remaining on our present non-scientific grounds we are in immediate danger.

This danger is not confined to upper cervical practitioners alone; it is general and applicable to all doctors regardless of their technical approach. I am aware of the fact that it is rather difficult to increase distortions of the pelvis, lumbar area or in the dorsal spines by an adjustment. However, it is very simple to increase misalignments of the cervical spine, and subluxations of the atlanto-axial area of the cervical spine are nearly always increased by rotatories, master cervicals and other leverage technics that violate mechanical principles. Adjustment of this area of the spine is one of precision based upon adequate and accurate measurement. The damage to the neurological component is much greater in the cervical spine, and thus is more apt to sustain damage from non-specific technics.

It is in the cervical spine that the greatest harm is being done by these techniques; but the results of this harm are not confined to the cervical spine alone.

Further, the fact that the neurological components of the cervical spinal cord, brain stem and some of the brain areas itself are very susceptible to damage from incorrect adjusting in the atlanto-axial area with resulting and concomitant damage and distortion not only in the immediate cervical-skull area but throughout the entire cord down to the conus medullaris is now established fact.

And it is a fact of which the medical profession is aware, and I can assure you that the upper cervical area is one of deepest interest to the medical profession. As one medic told me: "We consider that the real basis for any truth to the chiropractic principle exists in the occipital-atlanto-axial cervical spine. Your research on the relationship between the pelvic girdle, short leg and the misalignment factors of the atlas vertebra definitely shows the vertebral subluxation to have far-reaching effects throughout the body and establishes the subluxation as a pathogenic process."

It is a demonstrable fact - a matter of scientific demonstration - that the misalignment factors of the atlas produce stress and strain upon the pelvic girdle and lumbar spine because of the neuro-muscular involvement that the atlas is capable of producing when it is subluxated. This means that an atlas subluxation is a precursor - a fore runner - of every pelvic and lower spinal distortion. The presence of spasticity of the musculature of these spinal areas is solely the result of atlas subluxation, and this is scientific and neurological fact backed by 25 years of testing.

Now this research has three clear meanings for chiropractors regardless of their technical approach whether it be pelvic, full spine or cervical.

FIRST, that unless an atlas subluxation is present and active, distortion of the lower spinal column will not be present - no atlas subluxation - no distorted pelvis.

SECOND, that regardless of the technic used, permanent correction of the pelvic girdle and lumbar spine will not occur unless and until precise alignment of the atlas is an accomplished fact.

THIRD, that the presence of vertebral misalignment at least in the occipital-atlanto area can produce involvement of the susceptible neurological component, and to this extent at least the basic premise of the vertebral subluxation and nerve involvement from it has been scientifically established.

REPEAT.

It can be conclusively demonstrated that any given misalignment direction of the subluxated atlas has a definite effect upon distortion of the pelvic girdle, and this can be accurately accounted for and determined by mensuration

of the misalignment factors of the atlas subluxation. As a result of this lengthy research, it becomes imperative that the correction and the maintenance of structural integrity of the lower spinal column depends primarily upon precise measurement of the atlas misalignment factors and their maximum correction.

As the atlas misaligns into each of the orientation planes, frontal, sagittal or transverse, the pelvis distorts accordingly into its orientation planes. For example, if the atlas misaligns into the right frontal plane, and this direction is the predominant misalignment; the pelvis will respond by moving into its left orientation plane and then rotating in the transverse plane.

Distortion of the pelvis into any or all of its planes is always an indication of spastic contracture of the lumbar and pelvic musculature, and spastic contracture is a positive indication of neurological involvement at the occipital-atlanto area of the cervical spine. Whenever distortion of the pelvic girdle is present and spastic contracture is involved, there is an atlas subluxation involved.

Therefore, when we consider the question of majors, we must account for the effect of the vertebral misalignment upon the neurological component. An attempt to determine a major only on the basis of degree of vertebral misalignment, as is so frequently the practice, is a dangerous procedure. Bones alone do not make subluxations.

In discussing this subject, it is, perhaps, apropos to point out that there is no such thing as an axis major. If an axis misalignment is present in the patient, it must be corrected by the adjustment of the atlas. [I use the word "adjustment" in its true sense: that of a force vector which restores the misalignment factors of a subluxated vertebra to or toward normal.]

What, then, is so detrimental about an axis major? The reasons are (1) mechanical and (2) neurological. **MECHANICALLY**, any adjustment of the axis regardless of the contact area will change one of the radii of motion on the transverse plane; in short, it will cause a mechanical rotation of the atlas due to the position of the condyles as they border the foramen magnum. This introduction of a force vector on the axis will shorten one radius of motion and lengthen the opposite radius of motion because these radii of motion are dependent for stability upon the relation of the odontoid process to the vertical axis of the body.

NEUROLOGICALLY, the axis adjustment will produce a transverse traction upon the spinal cord which is further subjected to a comprehensive involvement by the mechanical process just described.

The relationship of the odontoid process to the vertical axis of the body is a determining factor in whether or not the atlas rotates anterior or posterior because of the effect of the radii of motion. This is part of the research on the

production of the vertebral subluxation which is not as yet completed. For that matter, research is never finished; it is a constantly progressing process. Nevertheless, it is mandatory that in order to understand what happens in a subluxation, how it happens, and how it creates disease processes in the human organism that we must understand in scientific terms the production of the vertebral subluxation as well as the reduction of the vertebral subluxation. Adjustment is the key word in research.

Manipulation of vertebrae will not give us the facts which we need to know for the simple reason that manipulation of vertebrae will not restore them to normal position thereby releasing the neurological component so that we can make accurate and consistent deductions concerning the premises which are set up.

Testing of the basic chiropractic premise to be a valid testing must not involve procedures and methods that are contrary to the terms of the premise. There are certain basic questions, the answers to which are vitally essential to the testing process.

For example, can you imagine a scientific body conducting an examination of chiropractic to determine its scientific validity? They would ask

1. (a) How do chiropractors determine vertebral subluxation?
(b) Define a subluxation?
2. What unit of measurement is used and why?
3. How is the normal determined?
4. How are subluxations produced?
5. In what way specifically is the neurological component affected?
6. What specifically happens to the neurological component?
7. From a physico-chemical stand-point, how does the neurological component react to an alleged subluxation?
8. What physical objective signs indicate the presence of subluxation?
9. If subluxations cause symptoms, can you demonstrate this from the subluxation per se?
10. Upon acceptable what scientific principles is chiropractic based?
11. What criteria are used to show the effect of alleged vertebral subluxation on the organism? Vital signs.
12. What procedure do you use to determine the effects of subluxations?

These and like questions will need scientific and acceptable answers before chiropractic obtains status as a healing art and prestige for its adherents. There can be no resort to vitalism; neither will non-scientific answers

suffice; and I submit to you that in all fairness chiropractic is not entitled to consideration or support until its science is purified and its procedures are standardized; and the premises upon which it is based are proved or modified by scientific testing.

These statements, of course, will be considered in some places as heresy; the remarks of a subversive. But regardless of charges and counter-charges, the fact remains - the dangerous situation exists - that the profession, or a large segment of it, holds itself out to perform a service to the public of reducing subluxation and this is seldom the case. This raises a legitimate question of professional morality. In this day of consumer protection by government, the question of legalized plunder may at any time arise. For when a profession holds itself out to perform a service - the reduction of the vertebral subluxation and cannot or does not fulfill that service - it gambles from day to day with its survival. Misrepresentation to the public does not enhance its prestige, or advance its interests, or protect its practitioners.

We need to go back to the period of the 1930's when a physical basis for the establishment of a chiropractic science began to be laid. Since this time we have retrogressed scientifically, and this deterioration has adversely affected our image. We did, however, make a scientific beginning in the depression year.

In 1938, Volume XX was published by the Palmer School of Chiropractic, authored by B. J. Palmer. This book contained a study of cases who entered the B. J. Palmer Clinic and of whom comparative graphs were taken, comparative x-rays and a system of measurement of the subluxation, or and I quote from the book: "subluxation distance and adjustment correction", (Unquote)

I think it is of interest to note that on the preface page of volume XX, B. J. Palmer quoted from page 94 of a book entitled "Personal Hygiene Applied" written by a medical doctor in 1925 by the name of J. F. Williamans. I quote"

"Chiropractic will remain a debatable subject, even to chiropractors, until scientific standards and tests are applied to it. It may grow by advertising methods, it may record "cures" by adjustment of subluxations, but it will remain a claim and a cult until it meets satisfactorily the sort of tests that intelligent men everywhere make to cause and effect questions." End of quote.

REPEAT.

No truer words were ever written regarding chiropractic, and these words were written 44 years ago - more than half the entire life-time of chiropractic. B. J. Palmer must have realized the significance of these words written by a medic for he included them in Volume XX, and he attempted to do some testing about this "debatable subject" during the time his clinic was in operation. It was not too long, however, before this beginning lapsed back

into the mists of indecision and the fog of vitalistic thinking.

Today, 44 years later, chiropractic is in a worse state from the standpoint of scientific progress than it ever was since the 1930's. It is still a debatable subject "even among chiropractors", and it will continue to be until scientific standards and tests are applied to it. This is the true basis of professional unity. In the eyes of the scientific community, chiropractic is only "a claim and a cult." It is NUCCA's intent to change that situation regardless of where the chips fall.

Until such changes are made, you can expect such reports as recently came out of H.E.W., you can expect division among your colleagues, you can expect professional disunity; you can expect legislatures to diminish your true status always downward and downward; you can expect to continue to be clobbered by your medical opponents; you can expect such inadequate defense of your profession as you have recently seen; you can expect your prestige to keep falling as attacks mounting; you can expect the constant thievery of your procedures; you can expect more outside governmental supervision and so on ad infinitum. This situation NUCCA intends to change with your support and your help, and change it we must.

Today the situation has deteriorated to the point where we cannot get agreement even among straights as to what to do with a subluxation. D. D. Palmer knew what a subluxation was and he defined it; B. J. knew what a subluxation was and he defined what it was. Sure, these were premises or hypotheses that should long ago have been subjected to scientific scrutiny and testing, and were not so tested, and herein lies the problem, and also the reason for the deteriorated state in which we find ourselves today. But both these men said it was mechanical and should be so considered. We cannot even get agreement on what to do with the misalignment factor of the subluxation which D. D. Palmer called a partial luxation - a vertebra out of its normal position - even though any normal 10 year old child could tell us that the misalignment factor of a subluxation requires re-alignment. The misalignment factor of the subluxation is the most important factor because without it no subluxation could exist. You cannot have neurological involvement in the absence of misalignment.

D. D. Palmer knew this because in 1910 he wrote in his book "The Chiropractor's Adjustor", page 42, quote "adjustments are only made when a vertebra is returned to its normal position", unquote.

B. J. Palmer knew this because he wrote on page 208 of "The Subluxation Specific - The Adjustment Specific" quote: "If a subluxation is a subluxation, then it is out of normal relationship. If an adjustment is an adjustment, then it (subluxation) must be restored to normal relationship." Unquote. Where is this concept today? What school teaches this? or the manner by which it is done?

According to information I am receiving lately, there is a growing movement in chiropractic to do away with the subluxation concept. We can't do anything about the subluxation - we can't solve the problems inherent within the subluxation - so do away with it. History repeats itself - Osteopathy came to the same conclusion a few years ago - remember, They got confused, too. So the idea is growing: We can't solve the problems, we can't prove the hypothesis scientifically, so let's throw out the subluxation. I do not think NUCCA will stand still for that. I don't think NUCCA is prepared to throw out the basic chiropractic premise, or lose it by default or exchange it for modalities.

The odd thing about this proposition, which originated in one of our own chiropractic colleges, is that no exponent of this theory of discarding the subluxation can present one iota of proof that it is sound or unsound, and I say that the burden of proof rests on those who would destroy the essential nature of chiropractic to disprove it scientifically before they seek to destroy it.

The other day I received a letter from a doctor in a distant state where insurance guide-lines are being set up. In these guide-lines was a section requesting that x-rays not be taken for mechanical interpretation purposes alone.

Let me quote from the letter: "We should all be more aware that interpreting x-rays strictly for mechanics is a risky business and I have good authoritative information that such a procedure would go down the scientific tube if taken to court."

I was asked for an opinion so I gave one. Apparently the writer of this letter does not believe that chiropractic is a mechanical science - or at least that is its nature so he does not understand chiropractors. Therefore, taking and interpreting x-rays to establish a mechanical listing, which is what is involved, in order to give an adjustment, which is a mechanical transmission of energy, is sufficient reason for x-rays. Also such a mechanical listing does constitute an adequate diagnosis, and is good procedure simply because no one ever moved a vertebra except thru a mechanical transmission of energy. There are only four kinds of energy transmission - thermal, electrical, mechanical and chemical. Heat will not move a vertebra; neither will electricity nor will a pill move a vertebra (which is news to some chiropractors.) We are stuck with mechanical because it is a method of impact and compression, but it will move a vertebra.

It would suit some chiropractors if all that was required to reduce to normal a vertebral subluxation was that the patient was hooked up to an electrical outlet, or a heating element or we had several types of colored pills. If the patient had a 5 degree laterality, give a red pill; if he had a 3 degree rotation, give him a green pill and so on. However, this wouldn't work because of the difficulty of finding enough chiropractors who could accurately measure a 5 degree laterality or a 3 degree rotation. We would need a

multi-colored pill that would set the subluxated vertebra into motion on several planes at the same time. Even then there would be an argument as to where the subluxation existed in the spine, so the question would arise as to the locality of administration: That is to say, whether to give the pill orally or thru the rectum.

So wherever we look in the profession we see the signs clearer and clearer. Reject the basic premise instead of applying scientific testing. D. D. is dead; B. J. is dead. There is no defender of the restoration principle; no voice of authority urges the profession to consider well the mechanics of the subluxation; that an adjustment is only an adjustment when it restores the normal relationships of vertebral misalignments as both D. D. Palmer and B. J. Palmer said frequently.

If we refer to the "Manual of Chiropractic Sciences" C/C P.C.C. 1965, page 16 we read:

"In what is termed the 'border-line case' two things should be remembered:

No. 1. Atlas laterality does not have to exist in every case, and No. 2. use as many points for checking laterality as possible. If there is conflict in measurement or angulation between points used with small amounts of variation, then laterality, very likely, is of minor concern."

In the same manual under the heading "Cervical Correction," we find listed a section devoted to "Traction Leverage Moves"; "Diversified Moves"; "Rotatory Breaks" for atlas and axis; also "Modified Rotatory Breaks" "Modified Cervical Breaks"; "Modified Thumb Moves."

The scientific and demonstrable facts of the matter are that atlas laterality does always exist - read the A.S.C. and Leg Imbalance. If there is conflict in measurement, then the system of measurement is erroneous. Laterality is never of minor importance because (1) it determines the side on which the adjustment is applied and (2) as little as 3/4 of a degree of laterality triggers the neurological component.

Now why should there be "Conflict in Measurement"; either something is measurable or it is not? Misalignment factors of a subluxation are measurable in degrees because they constitute rotatory motion whether it is laterality of atlas, superiority or inferiority of atlas or rotation of atlas. There never has been a border-line case and there never will be a border-line case. Because rotatory motion is measurable, all atlas vertebral movement is measurable.

Laterality is never of "minor concern"; either it exists or it does not; either it is adjustable or it is not. If it is less than 3/4 of a degree, it will do no harm to the neurological component; if it is more than 3/4 of a degree, it will cause neurological damage if left alone for a period of time which is usually about one month in duration.

The degree of neurological tolerance in the atlanto-occipital area is about 3/4 of a degree. This is approximately

the width of a pencil mark.

In reference to diversified moves, traction leverage moves, rotatory breaks and modified breaks, these are non-specific and dangerous manipulations and are in violation of mechanical laws, non-scientific in their applications, and should be prohibited by law. For too long we have watched incompetent instructors teaching these dangerous practices and procedures to students and the time has come to speak out against these practices whether or not chiropractic colleges approve them by some system of approval that itself lacks any scientific validity.

Chiropractic is mechanical in its basic nature at least insofar as the production and reduction of the vertebral subluxation is concerned. Therefore, its problems and their solutions fall within the environment of mechanical and the physical sciences. It is by the application of the pertinent principles of these sciences to our research problems that we progress and build an acceptable science that can be recognized by the scientific community. We can not do this if we use procedures that violate all science and all reason and do harm to our fellow man.

So long as the scientific formula exists that states that work equals force times distance we must apply that formula in our adjustments. This means we must apply force so that we control it and we cannot control force vectors until we know how to measure subluxations. Distance is the direction factor of that formula, therefore adjustments must have their line of drive predicated upon the resultant of the misalignment factors of the particular subluxation we are adjusting.

Force is a vector which means that it is going somewhere; that it has magnitude and direction. It is going somewhere into the subluxated vertebra either to reduce it or to increase; to replace it or displace it farther; to restore nerve function or to more greatly impair nerve function; to cure disease processes or to cause them.

For these reasons cervical breaks, rotatories, thumb moves, traction leverage moves are not and cannot be classified as cervical correction moves. The magnitude and direction of the force vector cannot be controlled. The result is harm rather than benefit; increased subluxations rather than reduced subluxations.

These things are so contrary to scientific thought; so foreign to the applicable scientific principles that apply; so easily demonstrated to be in error that one is readily justified in asking why chiropractors persist in referring to their profession as a science. The situation is worse today than it was in the 1930's.

Somehow we seem to object to the fact that we are basically constituted a mechanical science. Perhaps, it does not sound dignified enough for some; perhaps it is just that we do not understand the term. Nevertheless, mechanics pure and simple lies at the basis of chiropractic, and the

only way through which chiropractic can advance toward acceptance as a science is by way of mechanical principles, and their application.

D. D. Palmer voiced it when he stated that, quote "from this basic fact, to create a science which is destined to revolutionize the theory practice of the healing art." What was that basic of which D. D. spoke? It was the restoration to normal of subluxated vertebrae; the application of mechanical principles in the adjustment in order to restore misaligned vertebrae to normal position.

But let us look at another voice which speaks through a book entitled "Chiropractic Orthopedy, C/C 1956, Palmer College, Page 191: Quote: "A chiropractor is not a spinal architect nor a spinal mechanic and should work through the Innate Intelligence of the body involved to bring about results rather than attempting to manually shape the spinal column."

Here we have an authoritative voice which spoke in 1956 rejecting the mechanical approach; abandoning the principles of force, direction, control, care and predetermined restoration of the misalignment factors and advises that the whole matter be left in the hands of a vitalistic concept. He states that the chiropractor should work through the Innate Intelligence of the body which I submit to you is identically the same approach as would be used by the "spinal mechanic" which we are advised by this book is wrong. Thus this statement impliedly denies that the principles of mechanics that apply to the production and reduction of the vertebral subluxation are themselves the product of the Universal Intelligence which created all laws, all sciences, all systems, all life and all things and released scientific knowledge of them through the Innate Intelligence of men and women who, through the application of these principles and their evolution, insured the progress of man on earth and into space.

Quoting again from the same book, same page and same paragraph, we read further: "Considering the infinite number of muscular combinations and other factors which play upon the spinal column both directly and indirectly, it becomes evident that the alignment of the spinal column by a purely mechanical approach is absurd. Vertebra are not building blocks to be shoved hither and thither, but rather they are integrated parts of a living body and, as such, have a guiding force to repel detrimental forces as well as to accept those concussions of force scientifically applied."

Here we see it again - reject the mechanical approach. Yet had the author of this book researched his facts he would have known that the "muscular combinations and other factors which play upon the spinal column" are subject to mechanical laws; these factors do not "play"; they are subject to the mechanics of muscle action and these mechanics are reducible to exact mathematical formulae.

This is why we have stabilizing and rotatory components; tangential acceleration; perpendicular acceleration; leverage and equilibrium of forces; levers representing all 3 mechanical types and other various applications of mechanical principles to muscle action. In fact, the spinal column constantly seeks to align itself through the mechanics of muscular action. Apparently the author was not aware that innate intelligence operates through the mechanics of muscular action in the spine's constant struggle against gravity, and we would never understand HOW innate intelligence DOES THIS unless and until we applied MECHANICAL REASONING to the body. Thus the author has accomplished the task of denying both innate intelligence and mechanical reasoning - here is the absurdity of the matter. Any first year kinesiology student could have advised him of his erroneous thinking; and we cannot help but wonder why students are confused and we are rejected scientifically.

We must add further in regard to the above paragraph we quoted that if vertebrae in a living body have a "guiding force" capable of repelling detrimental forces as well as accepting concussions of force scientifically applied, then we need have no fear of injury to the spine through accident unless the accident is scientifically applied. To create damage the vertebrae would have to accept the force and this the spine would only do if the force is scientifically applied; that is to say, a force applied according to the laws of mechanics. If this were true, no vertebra could subluxate, no adjustments would be required good or bad; no x-rays are needed; no chiropractic colleges need exist; and we can go home and forget the whole business.

I have no desire to criticize this reasoning, but it is an example of the lack of thinking and of knowledge that is causing us to be held in ridicule by such committees as the H.E.W. AD. Hoc Committee. It is, further, an example of the confusion that exists in voices of authority that are listened to and believed. This book has been on the market, accessible to anyone, friend or foe, for 13 years. I think in these matters we have two choices (1) to request that this sort of nonsense be removed from our college text books or (2) to do nothing and let this pseudo-scientific stuff become the basis of an attack against us.

In my judgment it is quite evident that the author of this textbook was confused as to what to attribute to mechanics and what to credit to Innate Intelligence. Not realizing that the vitalistic premise as he used it is susceptible of explanation in terms of physical science, he chose to write his opinions in terms of vitalism. Had he realized the immensity of the vitalistic concept, he could have explained his theories in a mechanical-physical context which would have resulted in greater glory to his vitalistic concept. Unfortunately, he chose the abstract over the physical; that which he could not prove over that which he could; the unknown over the known and produced a text book

unworthy of the name.

Thinking in terms of a vitalistic force confuses experience. If man attempts to interpret observable phenomena in terms of vitalism he finds nothing to which he can anchor; there are no frames of reference; his reasoning can be easily proved illogical. The same is true in researching the production and reduction of the vertebral subluxation: we must work within scientific principles against proven and acceptable frames of reference - not with super-mechanical agencies or vitalistic concepts.

Chiropractic is as mechanistic in nature as it is vitalistic - in fact more so. Mechanism is the philosophy which explains natural phenomena by reference to matter and motion. If you do not agree, try to explain a vertebral rotation on a transverse plane in vitalistic terms, or the rotation of a vertebra on a frontal plane in the context of vitalism. If you attempt it you end up talking about guiding forces or other non-meaningful terms.

True, the mechanistic theory postulates that all aspects of living organisms can be explained by the laws of inorganic nature and that there is no directive vital principle. In other words, it refutes vitalism. Nevertheless, both of these philosophies are only theoretical, but mechanism we can learn from and with whereas vitalism is static and not subject to testing.

This is, after all, a process of purification recalling us to that which we can measure, observe, understand, and repeat in our actions with a fairly high degree of predictability. This is the only environment for research. The inviolability of experience and the rational correlation of experience prevents the professional flirtations we seem destined to make with those pseudo-metaphysical and quasi-religious propositions that are so evident throughout the chiropractic profession and which brand us as cultists.

Too many take the position that a rational discussion of the vitalistic over-tones of this profession is a condemnation of the innate philosophy, and they react to a discussion such as I am now presenting to you with fists clenched and fire in their eyes. Their innate philosophy is all important and must not be tampered with.

This attitude clearly indicates the lack of understanding which some have of the vitalistic concept. This is understandable because they accept by faith their philosophy and reject any attempt to deal with the physical aspect of their science by methods that are provable and demonstrable. Thus they are forever limited because they have rejected the mechanistic approach for the vitalistic and set-up between the two extremes a barrier which does not exist in reality.

Yet this false barrier does divide us into camps, each camp conditioned by the environment of vitalism or mechanism and each supported by doctors whose previous training and whose practical or idealistic traits place him

as an adherent of one or the other of the two schools of thought.

The mixer, generally speaking is the type of an individual who is practical, realistic, pragmatic. We do not see him overly concerned with that which is not demonstrable, that which does not have a local application. He is not too greatly interested in concepts which are metaphysical and philosophical. Therefore, we do not see him attending professional meetings that stress the vitalistic approach - such as the D. E. meetings. He is too practical for that sort of thing.

On the other hand we have a segment of the profession to which the vitalistic approach is all important. These exponents of vitalism are those whose professional behavior patterns are conditioned by belief in the super mechanistic.

It is, therefore, understandable that we have disunity in our ranks. Understandable because there are two extremes within the chiropractic environment neither extreme compatible with the other. Disunity is a natural and inevitable consequence.

In 1961, B. J. Palmer said of medicine that it was "still in the dark, failing consistently;" and that "the one basic reason" for this (was) that the medics seek "physical causes for physical diseases." He went on to say that the medics had overlooked the "abstract factor" of what the internal innate does, as it does it, in regulating all function at all times, etc. This statement was reprinted by the ICA in April of this year. 1969.

I cite this quotation because it is an example of an innate-loaded statement that would never be acceptable to a type of mind that is mechanistically inclined. It is a vitalistic statement and acceptable only to those who are vitalistically oriented.

I know that B. J. Palmer knew that the subluxation was a physical cause because he described it as a mechanical process in his volume XVLLI page 528. Mechanics are as physical as, for example, ultra-sound. But, said B. J., the medics overlooked the "abstract factor" of the internal innate, and that statement is debatable because through any transmission of energy be it thermal, chemical, electrical or mechanical, the "abstract factor" of innate is influenced pretty much the same. The difference lies not so much in the abstract factors as it does means of influencing the abstract factor and that is a matter not of vitalism but of mechanism. So even innate gets back to the principles of mechanics and physical science in the final analysis.

If would seem, if we but take the time to analyze the situation in which we find ourselves, that rather than to continue to build the barrier that separates us, we begin to tear it down. This does not mean that either camp need change its approach. It means simply that we apply in the area of vitalism, the solutions that are mechanistic. In other

words, we begin the testing and the providing - the research - to the production and reduction of the vertebral subluxation; in short, that we build a science that is acceptable to the scientific community - that makes sense to the finite mind. The chiropractor - vitalist has nothing to lose; the chiropractor-mechanist gives up nothing, but between the two greater understanding grows as the mechanist begins to see the practical application to the basic chiropractic principles.

If we closely analyze the chiropractic situation, we can see that there is no other basis for unity; we tried unity of people before and it failed. Both vitalism and mechanism are integral parts of our professional life; both are forces for good. One cannot, however, research vitalism with any degree of acceptable success. The only approach to research is thru the mechanistic philosophy. It is a sustained program of acceptable research that will serve to weld this profession together, because it will unite vitalist and mechanist; one will strengthen the other; division will gradually disappear; the subluxation and its reduction will once again become the nucleus of the chiropractic profession.

Bergson apply stated the role of vitalism in science when he said: "A very small element of a curve is near being a straight line; and the smaller it is the nearer . . . So, likewise, 'vitality' is tangent, at any and every point, to physical and chemical forces . . . In reality, however, life is no more made up of physico-chemical elements than a curve is composed of straight lines."

I believe in the Christian's God, the ALL-Wise, Hahneman's Vital Force, the Divine Spirit, Hudson's Subconscious Mind, the chiropractor's Intelligent Force, the Allopath's VIS Medicatrix Nature - the healing power of nature. That, I suppose, makes me a vitalist, but I also

believe in that which I can measure, observe, test, and reason about and that makes of me a mechanist. I find no conflict in the two, and I also find that the deeper I go into the measurement, testing and reasoning, the better I understand the principles of my profession.

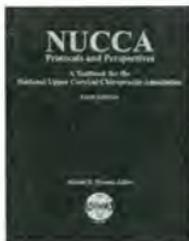
The need for legitimate research is imperative; it is the difference between survival or destruction. I am not one of those who would claim that our "distinct and pure philosophy" will unify us or save us as was recently said, for it will never do it. This should be more apparent since the report of the Ad. Hoc Committee of H.E.W. If we are ever to acquire recognition as a science we must become a science; we must speak the scientific language; we must apply the standards and tests which reasonable men everywhere apply to cause-and-effect questions. Make no mistake about it: professions that survive are built on science and not on philosophical concepts that are not susceptible to testing; this is the road to cultism. We must not be afraid to test.

Hans Zinsser once remarked of the biologist: "He knows that the physico-chemical analysis will never give the final clue to life processes; yet he recognizes that "Vitalism" and "Neo-Vitalism" are little more than a sort of amorphous theology born of a sense of the helplessness of mere "Mechanism."

"So, said Zinsser, "the patient biologist plods along, piling up his empirical observations as honestly as he can - getting what satisfaction he may from the fact that he is helping, by infinite increments, to reduce the scope of vitalistic vagueness to narrower and narrower limits."

This we must do also.

Notes



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