



## **Neurologically based chiropractic**

**Science is redefining the relationship between the adjustment, the nervous system, and health.**

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Today, more than ever before, the profession is at a crossroads. It has lost its focus on the original concept of its primary application in altering neurological function.

Virtually every chiropractor today when asked, "What system is your primary focus?" will answer, "The nervous system!" They will, then, because of tradition within the chiropractic education system, go on to talk about vertebral subluxation.

They will describe how this creates "nerve root compression," which in turn creates abnormal neurological function. Research has never been able to prove this theory and further offers no explanation for chiropractic techniques that do not move vertebra yet show great results.

A profession lost between what it believes and what it says. A profession lost between what it can do and what it will get paid for by the insurance companies. Perception or deception is the question and on whose part?

### **A new direction**

Now that there's an understanding of where the profession is today, and later in this paper, how the misdirection happened as well as the cost to chiropractic, the potential to redirect and develop a way out of this restrictive and disempowering position will be discussed.

What is fascinating is that the road back to a bright future for chiropractic does not involve a complete new structure. All it takes is recognizing the "intent" of chiropractic care. It is really that simple!

The profession has the foundation in place, and 99 percent of practitioners already understand the "intent" of chiropractic — the primary focus of its care is the *nervous system*. This simple statement is the key that will unlock its future.

The research today in the field of neuroscience continues to demonstrate the importance of understanding the role of the nervous system in the relationship between health and disease.

Modern science has moved away from the "germ theory" and toward "psychoneuroimmunology" and "immunoendocrinology" when looking for the cause of disease with concepts such as the "thalamic neuron theory" and "dysponesis." 1,2

If you can demonstrate the ability of the chiropractic adjustment to alter the neurological response, you can then defend your position and role in the field of health and wellness. The good news is that research has already been done to prove the adjustment does in fact directly affect the immune response and has the ability to alter its neurological patterns. 3

No longer do you have to use outdated dialog when explaining why chiropractic gets results; dialog such as, "Your spine is misaligned and it is putting pressure on the nerve!"

The dialog today should be "The reason you are having challenges" (such as back pain, asthma, headaches, chronic fatigue syndrome, high blood pressure, ulcers, IBS, etc), "is because the stressors in your life (physical, emotional, chemical, electromagnetic), over time, have created patterns of neurological activity that are now challenging your health.4

Your nervous system has become overwhelmed and is sending signals to your body's systems that are now not working ideally." What we need now is to understand the neurological connection.

## **The neurological connection**

The primary failing in the historical theory of chiropractic was the inability to explain how the vertebral misalignment (VS) happened in the first place. The theory of VS begged the question of “If the body is a self-maintaining and self-correcting mechanism ‘how’ and ‘why’ would it create VS and/or not be able to correct it?”

When you add the unexplained positive results from techniques, which do not use manual vertebral thrusting, it becomes obvious that there must be something other than correcting vertebral misalignments involved.

The body is a sensory-to-motor response neural network. With the adage of one of the chiropractic chants of “above down-inside out” (ADIO), what was sadly missed was the first part of the action, that being, “outside in-inside up.”

In other words, the sensory information side was completely missed. This was a critical mistake, because it could have explained the power of the adjustment to alter people’s lives.

The study of the three main systems of the body offers a picture on their relationship.<sup>5</sup>

1. The passive system — bones and joints — does nothing on its own; it provides the potential for movement, measured via X-ray and posture studies.
2. The active system — the muscles — creates movement in the joints and all other body activities — respiration, cardio vascular, elimination etc. — measured by sEMG ROM.
3. The control system — the nervous system — is the central organizing authority; measured by EEG and autonomic nervous system responses.

The historical definitions have the profession believing it is neurologically based but its focus and dialog is on the passive system that cannot do anything on its own. Any response at the passive level is actually a tertiary reaction.

The work done in the EEG studies on the effect of the adjustment to alter brain wave patterns demonstrated the influence of the adjustment to stimulate the sensory system.<sup>6,7</sup>

EEG scans are very reproducible and are a reliable method of demonstrating the effectiveness of a therapy to affect change in the CNS. The results were dramatic and have great impact on the understanding of the role of the chiropractic adjustment in altering system function. Even with this breakthrough research, the profession continues to cling to its own concepts.

## **The effect of the EEG adjustment studies in redefining the profession**

The new knowledge of the power of the adjustment to alter brain function creates a need for new definitions within the profession. It is important that when using the new definitions for the profession, it be recognized that the new position doesn’t discard the basic principles but offer a modern interpretation that stands up to current neuroscience knowledge.

As the intent of care is to focus on the neurological function, the following definitions support this position. In dealing with the complete neurological response (from afferent to efferent) you must include the sensory system role.

To do this best, start with understanding how the chiropractic adjustment is a feedback system. Feedback is a process whereby the results of an action serve continually to modify further action.

As the term subluxation when used within chiropractic suggests a fixed mal-position of a vertebral joint surface (not the medical definition), and while this may exist, the relationship between this condition and nerve root interference has never been proven. Add the unexplained effectiveness of light touch techniques and it is clear that the time has come to redefine the term. 8

### **Updated model of subluxation**

The first step here to understand is the ideal neurological state of **neural integrity**; this creates general health and wellbeing, “a resource for daily living,” and includes:

#### **Components of neural integrity**

##### **Optimal cell-to-cell communication**

- Cellular innate, organ innate, system innate
- All coordinated by the central organizing authority (CNS)

##### **Ideal neuroplasticity (ability to adapt and respond)**

- Sensory input
- Alert response mechanism
- Fight/flight response
- Recovery ability

##### **CNS activity**

- Cortical activity — EEG brain wave patterns
- Limbic system response
- (ANS balance — sympathetic/para-sympathetic)

#### **Components of compromised neural integrity**

- Reduced neuroplasticity (loss of ability to adapt and respond)
- Inappropriate action (Dysponesis)
- Distorted cell-cell communication (challenge to cellular immunity & humeral immunity)

#### **Maladaptive behavior**

- CNS malfunction (message distortion), sets up abnormal neurological pattern which distorts the active system (muscle action) which effects system activity (cellular disruption, organ function, system failure, joint relationships)

**This leads to sub-optimal health, diminished quality of life, and disease**

### **Compromised neural integrity *is* SUBLUXATION**

- Created by emotional, chemical, structural, and other stressors
- Maladaptive behavior leads to inappropriate structural (organ or system) activity — CNI creates abnormal neurological patterns (abnormal means a response that is not in the best interest of the body long-term)

### **A new understanding of subluxation based on current neuroscience**

Subluxation is an abnormal neurological pattern or compromised neural integrity (CNI). As the adjustment (discussed later) is not the act of correcting a misalignment but rather a neurological response, this definition brings chiropractic into the 21st century. It is a very powerful neurofeedback application.

### **Biofeedback/Neurofeedback/Neuroregulation**

Neurofeedback is the direct training of brain function, by which the brain learns to function more efficiently.<sup>9</sup> We observe the brain in action from moment to moment. We show that information back to the person and we reward the brain for changing its own activity to more appropriate patterns. This also applies to the chiropractic adjustment as demonstrated by the EEG studies.

As we can now prove that the adjustment can alter central nervous system function, which in turn alters the body's system functions, the role of chiropractic care is much broader than the old definition limited to musculoskeletal model, but first we need to understand the influence of the adjustment in regard to neurological function.

### **The adjustment**

As research has demonstrated that the chiropractic adjustment alters brain wave function<sup>6,7</sup> and in doing so alters motor activity, the adjustment now falls under the definition of feedback. This knowledge offers the opportunity to bring the definition of the adjustment into line with current neuroscience. I offer this definition for an adjustment,

*“A chiropractic procedure whereby the consequence of an action serves to continually modify further action within the nervous system with the intent of creating harmony within the body's systems.”*

This new knowledge in neuroscience now calls for a more realistic definition of chiropractic.

### **New chiropractic definition**

Chiropractic is the art, science and philosophy of locating and facilitating the reduction of interference to the neuro- based allostatic responses of the body. (Allostatic: adaptive stress/recovery balance.)

### **Neurologically based chiropractic (NBC) influence on care programs**

As chiropractic deals with neurological function and can render care to reestablish normal neural activity, the use of medical diagnosis based on signs and symptoms is not appropriate. In consideration of the patient's health challenge, care programs should be based on Frequency, Duration and Intensity (FDI).

Frequency is the pattern of repetition of the care, such as three times a week and may include minutes, hours, days, or weeks. Duration is the length of the care, such as 10 weeks. Intensity involves the techniques and areas of care. A specific upper cervical adjustment is a high level of intensity while Torque Release Technique (TRT) is a low level of intensity. The intensity also involves the number of areas addressed: five or six areas adjusted is high intensity, while one to two would be low.

The testing of neurological responses is an indicator of the patient's care needs and responses. Example: An over-aroused nervous system responds best to light intensity, while an under-aroused system will respond to a higher stimulation. While this is an example, FDI varies with each patient.

### **Definition of neurologically based chiropractic**

The philosophical approach in which the central nervous system is the primary focus of chiropractic care and all spinal mechanics, joint play, vertebral fixations, VS or VSC responses are secondary or tertiary in nature.

### **The cause and challenge for change**

This paper is not an attack on the Chiropractic profession; however, it exposes the unwillingness of the profession to "let go of" outdated concepts<sup>10</sup> which modern knowledge and research do not support. There has never been a question about the benefits of chiropractic care,<sup>11-21</sup> except from some of those detractors to whom 114 years of positive results mean nothing.

This paper is more concerned with the profession itself, which has become locked in a state of "defense" as a result of continual attacks by the medical profession.<sup>22</sup> This defensive position has created a distortion in the message when defining chiropractic. The motivation behind this distortion begs the question, "Is it deception, perception, or lack of research on the part of chiropractors?"

The intent of this paper is to show how this distorted message developed and to reveal a new understanding of chiropractic which has the power to unite the profession as well as to destroy the resistance from other health professions.

A bold statement? It is not, but the real challenge lies within the chiropractic profession and its resistance to change. Chiropractic remains the last healthcare profession to remain steadfastly attached to concepts born out of the knowledge of 100-plus years ago. To understand this, let's look at some of the formative history of Chiropractic.

### **Historical events that shaped the chiropractic profession**

The first unfortunate development of chiropractic lies in the timing of its founding in 1895. During that time, the so called "scientific world" took a turn in a totally opposite direction from the foundations of chiropractic.

The primary philosophical position in the previous "scientific world" had been vitalistic<sup>23</sup> in nature (that there was a vital force in life beyond the chemical and physical); but during the late 1800s a new scientific belief, or philosophy, called "atomism" or "reductionism"<sup>24</sup> (life was only chemical or physical and by understanding the parts, we could then control life) became the center of attention.

Chiropractic was and still is a 100-percent vitalistic-based profession. It was unfortunate timing, as the “scientific world” of that time totally rejected any possibility or potential for chiropractic, and medicine turned to the reductionistic belief as it gave them control.

The vast majority of people have no idea why the two professions oppose one another, nor do they have any idea of the concepts of the two different philosophies. The great challenge here is that people make their health choices on one of these two approaches without any real knowledge of the philosophical foundations of their decision.

The limited understanding of neurological function at the time of D.D. Palmer’s founding theories of chiropractic gave rise to the conclusion that moving a vertebra in the spine altered body function, and this was the basis for “vertebral subluxation (VS) as the cause of disease”<sup>25</sup> for chiropractic. While D.D. moved to a more complete understanding of the neurological role, the “VS” definition remained the unique selling point for the chiropractic practitioner. And sell they did!

B.J. Palmer, D.D.’s son, further developed the profession into the second-largest healing art profession.<sup>26</sup> The 33 core principles<sup>27</sup> of the profession were developed and the three divisions of chiropractic were defined. Art, science, and philosophy were the guidelines and still stand today when defining chiropractic.

### **By the 1930s**

A problem arose, as science in those early years provided little objective proof to support the chiropractic philosophic foundation. The art, or chiropractic technique, was very crude, as moving bones was the belief: the more moved — the better, was the rule of the day. This makes it very easy to understand where the terms of “bone cracker” and “back snapper” were derived.

By the 1930s, however, B.J. Palmer’s studies started to reveal that there was something other than just moving bones going on,<sup>28</sup> but by then the rest of the profession found it much easier to simply keep the “vertebral subluxation theory” going.

Science was still unable to support the neurological position, that is vertebral misalignment puts pressure on the spinal nerve root, causing an interference to nerve information flow, and by now reliance on the “chiropractic philosophy” was making the profession sound and act like a cult.

The risk of being branded with cult status prompted chiropractic colleges and associations to start dropping any philosophical discussion from their programs.<sup>29</sup> In dropping philosophy from the three guidelines, science and art were left to support chiropractic.<sup>30</sup>

Scientific instrumentation at that time was not sophisticated enough to provide the necessary information to offer the proof required, so it left the chiropractic technique masters (the art) to define the profession. A disaster in the making! While the chiropractic arts improved, which was needed, the technique masters’ control divided the profession.

Whose technique was the right one? Where was the objective proof that one achieved better results than another? The challenge of defining chiropractic was critical and there was not any clear leadership emerging to offer an updated workable position.

## **Professional associations for the profession**

The first attempt at a chiropractic association was the forming of the Universal Chiropractic Association,<sup>31</sup> organized at the Palmer School of Chiropractic (PSC) in 1906. With the passing of state laws governing chiropractic practice, the first strong division within the profession began and in 1922 the American Chiropractic Association (ACA) was formed.<sup>32</sup>

The profession continued to experience disagreements over challenges such as scope of practice, and several differing associations have been formed over the years.

Today there are basically five associations with disagreements over these same issues. The ACA is musculoskeletal and medically modeled. In 1926, B.J. Palmer formed the International Chiropractors Association (ICA),<sup>33</sup> a more philosophically directed organization.

The Federation of Straight Chiropractic Organizations (FSCO) formed in 1976,<sup>34</sup> which is a very conservative “vertebral subluxation” and spinal-adjustment-approach-only group; and the World Chiropractic Alliance (WCA ) was founded in 1989,<sup>35</sup> now representing the latest model of neurologically based chiropractic.

The ACA is by far the largest and is much more medically modeled today than the ICA, FSCO or the WCA. There are also other groups such as the World Federation of Chiropractors (WFC),<sup>36</sup> which is a very medically modeled and “evidence-based,” in addition to the many other national and regional associations.

## **The role of third-party pay (insurance) in the direction of the profession**

When companies began to offer health insurance, the number of people wanting chiropractic care included brought the profession into limited health insurance coverage. As health insurance was designed for medical practice and therefore used billing codes for medical conditions, the included chiropractic profession was forced into defining chiropractic adjustment care with using medical diagnostic terminology.

As there was a direct relationship between insurance billing and income, the increased use of these medical diagnostic billing codes blurred the line between chiropractic and medicine,<sup>37,38,39</sup> and terms such as physical medicine, therapies, and manipulation care diluted the chiropractic profession even further.

## **The effects of reduced insurance coverage on the profession**

Today the effects of the inability to integrate new information, the pressure of medical opposition, the failure of the profession to retain its identity as a separate health service, and loss of insurance coverage leaves the profession struggling to identify itself and its mission.<sup>40</sup>

The profession is guilty of not funding research<sup>41</sup> that would support the neurological foundation of chiropractic, and instead following the medical model of what is called disease-based studies (e.g., chiropractic and asthma, or chiropractic and low back pain). The primary motivation of these studies was to get chiropractic included into more of the medical diagnostic billing codes.



## **What the scientific research of today has to offer chiropractic**

A paper on “Cause of Disease: A New Perspective”<sup>42</sup> outlines how the latest research on neurological function changes the models of health care. Medical, dental and chiropractic views are all changing as a result of new information regarding the cause of disease and illness.<sup>43</sup>

Today we know that the old medical concepts of the “germ theory” are no longer valid, and that stress directly effects general health. We know now that the old medical concept regarding the immune system as a standalone system in the body was wrong and that psychoneuroimmunology<sup>44</sup> is the key to understanding the body’s resistance to disease. With these revelations comes the need for all health professions to revisit their position, dialog, definitions, and intent of care.

When the world went from horses to motor cars for transportation, it not only changed the mode of travel but also the dialog and procedures involved. Feed bags and grooming did not apply to the new world of cars.

When we consider the “germ theory” and/or “spinal nerve root pressure” compared to “psychoneuroimmunology” and “neurological interference,” the leap is as great as from horses to motor cars. The new science has changed not only the rules but also the game and the dialog as well.

## **How the new science has caused a redirection**

The latest research on brain function has revealed the direct relationship between neurological activity, immune response, and the state of health or illness.<sup>45</sup> We now know that even genetic changes happen as a result of the influence of environmental stimulation,<sup>46</sup> which is not only at an external level but involves cellular response as well. All this new information has changed our understanding of the neurological role in keeping the body’s systems in balance. Research is providing tremendous new insights into body function and more information is developing on a daily basis.

The rate of new information is so great that institutions such as universities and health professions find it difficult to keep up. Entrenched medicine (at the general practitioner level) is years behind the new understanding, as are the vast majority of chiropractors.

## **Old to new definitions**

When it comes to chiropractic and new health information, the old definitions of chiropractic, subluxation, and the adjustment are no longer valid. The truth is that the old definitions never were valid, but because there was an inability to move them beyond theory, they remain in place today.

New information and research now offers evidence that makes chiropractic valid, and further calls for new definitions based on current knowledge. It’s time for some new definitions; first let’s look at some of the old definitions and why they don’t work, starting with chiropractic.

## Old definitions of chiropractic

ACA, "core chiropractic principle:"<sup>47</sup>

"With regard to the core chiropractic principle, which holds that the relationship between structure and function in the human body is a *significant health factor* and that such relationships between the spinal column and the nervous system *are highly significant* because the normal transmission and expression of nerve energy are essential to the restoration and maintenance of health.

"The practice and procedures which may be employed by doctors of chiropractic (chiropractic physicians) are based on the academic and clinical training received in and through accredited chiropractic colleges and include, but are not limited to, the use of current diagnostic and therapeutic procedures. Such procedures specifically include the adjustment and manipulation of the articulations and adjacent tissues of the human body, particularly of the spinal column. Included is the treatment of intersegmental aberrations for alleviation of related functional disorders."

ACA: "chiropractic principle:"

"Chiropractic is based on the premise that the relationship between structure and function in the human body is a significant health factor and that such relationships between the spinal column and the nervous system are the most significant, since the normal transmission and expression of nerve energy are essential to the restoration and maintenance of health." (ACA Master Plan, ratified by the House of Delegates, June 1964, amended, June 1975.)

ICA definition:<sup>48</sup>

"The philosophy of chiropractic holds that the body is a self-healing organism and that a major determining factor in the development of states of disease or dysfunction is the body's inability to comprehend its environment either internally and/or externally. Directly or indirectly, all bodily function is controlled by the nervous system, consequently a central theme of chiropractic theories on health is the premise that abnormal bodily function *may be caused* by interference with nerve transmission and expression due to pressure, strain or tension upon the spinal cord, spinal nerves, or peripheral nerves as a result of a displacement of spinal segments or other skeletal structures (subluxation).

"The science of chiropractic deals with the *relationship between the articulations of the skeleton and nervous system* and the role of this relationship in the restoration and maintenance of health.

Of primary concern to chiropractic are abnormalities of structure or function of the vertebral column known clinically as the vertebral subluxation complex. The subluxation complex includes any alteration of the biomechanical and physiological dynamics of contiguous spinal structures *which can cause neuronal disturbances.*"

## Challenges

The terms "diagnosis and treatment" are used in the definition of the practice of medicine. Chiropractic and medicine are different in both their application and philosophical construct. You cannot use terms that define an orange while defining an apple. This is not just a game of semantics.

The term "diagnosis" comes from the historical background of medicine. It starts with the medicine-man or healers of the past, during which time people who were sick were thought to have been possessed by some spirit. The role of the healer was to identify the spirit and develop a treatment that would rid the body of the spirit or entity.

This concept still exists today in medicine: signs and symptoms are grouped together and given the name of a disease, which is then called a “diagnosis.” A treatment is then prescribed with the intent to rid the body of the disease. A disease is then treated as an entity and current terminology reflects this with phrases such as “I caught a cold,” or “I have cancer.”

The terms “diagnosis” and “treatment” belong to the practice of medicine.<sup>49</sup> On the other hand, chiropractic is all about function or, better yet, lack of function. Chiropractic sees “signs and symptoms” or the “medically named disease” as a manifestation of dysfunction or dis-ease in the systems.

Chiropractic’s primary focus is the nervous system and whether it is responding to stressors and/or recovering correctly. Chiropractors should be considered “functional neurologists.” This means that they do not diagnose, but analyze the neurological function to find the source of the interference to normal responses. This form of health care is centered on the cause of the disease rather than the signs and symptoms arising from it.

The other challenges, in the above old definitions, lie in the use of terms such as “which can,” and “may be caused.” What is lacking are “or cannot” and “or may not” after each of these. When added, they reduce the old definitions of chiropractic to nothing more than a guessing game. The term “significant” fails due to lack of proof as to how it is significant.

The last point here is that, because of the profession’s inability to further the theory put forward by D.D. Palmer in

1895 to anything more than moving vertebra, the public’s perception has now limited the potential to nothing more than back doctors using medical references with some questionable connection to the nervous system. The Wikipedia definition of chiropractic offers evidence of such a perception: “Chiropractic is a health care profession whose purpose is to *diagnose and treat mechanical disorders of the spine* with the *intention* of affecting the nervous system and improving health.”

### **Old definitions of subluxation**

Next we need to examine the term “subluxation.”

*Early Chiropractic* (1910):50

“Structural dis-relationship of spinal joints causing nerve

impingement at the IVF.” Current explanation of subluxation:51,52

“Subluxation is a complex of functional and/or structural and/or pathological articular changes that compromise neural integrity *and may* influence organ system function and general health.”

So what we are seeing are the effects of the original theory laid down by D.D. Palmer. Even B.J. Palmer, as powerful as he was, could not redirect the profession away from the basic and limited concept of the bone on nerve root as subluxation and therefore chiropractic.

In a 1930s speech, B.J. stated: “Up until a few months ago it was generally believed that you could locate a subluxation by palpation; with a spinograph (X-ray); by the location of tender nerves, taut fibers, or contracted muscles. None of these can locate a subluxation. Any or all of these indicative guides can and will locate misalignments.”<sup>53</sup>

Somehow this fell on deaf ears and the profession continued to move further and further toward a musculoskeletal foundation as demonstrated by the following definitions of terms used in chiropractic. Note the emphasis on the limitation to structural approach first and foremost with very limited connection to neurological application.

### **Other opinions:**

“Subluxation should have an element of articular pathology, *but leaves the exact nature of that pathology unspecified*. Subluxation should be associated with a neurological effect in order to be considered a subluxation. Still, *the exact nature of the compromise to neural integrity is unclear*.”<sup>54</sup>

It should be evident that the current definition is not only severely lacking in logic but also unacceptable from a scientific foundation. It is obvious that the chiropractic profession is not keeping up with the world of neuroscience, which is now producing information that has the ability to offer a much more accurate understanding as to how chiropractic achieves its continually good results.

### **ACA terms<sup>55</sup>**

Subluxation:

“A motion segment, in which alignment, movement integrity, and/or physiological function are altered although contact between joint surfaces remains intact.”

Subluxation complex:

“A theoretical model of motion segment dysfunction (subluxation), which incorporates the complex interaction of pathological changes in nerve, muscle, ligamentous, vascular and connective tissues.

Subluxation syndrome:

An aggregate of signs and symptoms that relate to pathophysiology or dysfunction of spinal and pelvic motion segments or to peripheral joints. (Ratified by the House of Delegates, July 1994.)

This is important to note because there is a very strong faction in chiropractic — mainly the ACA — that wants to limit chiropractic to the medical mechanical/musculoskeletal model. They seek inclusion in third-party payer models, listing on medical billing codes, and acceptance by mainstream medicine. The traditional chiropractic terms such as “adjustment” are being dropped and “manipulation” is used in its place. This serves to not only confuse the public but the profession as well. Today physical therapy, physical medicine, and other like professions are moving in the same direction, so the distinction of chiropractic has already been lost. Chiropractic must now redefine itself, the subluxation, and the adjustment in terms that reflect the knowledge and research of the 21st century.

### **The knowledge that has the power to change the world**

Once again I refer you to a paper on “Cause of Disease: A New Perspective,”<sup>41</sup> which outlines how the latest research of neurological function changes the models of health care. Once you understand that the cause of all disease lies within the response and normal function of the nervous system, as has now been demonstrated, all health professions must revisit their basic philosophy.

As mentioned before, the “germ theory” as the cause of disease is as dead as using leeches to promote health. This also applies to the chiropractic theory of vertebral subluxation as the cause of disease. Many chiropractors have come to consider the vertebral subluxation to be chiropractic. It is not!

The greatest chiropractic researcher was B.J. Palmer, and back some 75 years ago his research lead him to state: “The majority of chiropractors work with the concept that *they* are the all-important feature of adjusting subluxations; and it is with this thought they proceed to push vertebrae into the position *they* think they need to be pushed into. Adjusting in their minds means pushing bones into adjusted positions. I never had such a concept!” He went on to say, “Vertebral subluxation is a symptom of interference of innate and not a cause.”<sup>56</sup>

As instrumentation developed and computers added the ability to compile data for insights in the area of body function, new information was presented to support B.J. Palmer’s statement. In 1970, Dr. Chung Ha-Suh at the University of Colorado in Denver did research showing the ability of the adjustment to alter vertebral position. According to Dr. Ha-Suh: “The physical force of the adjustment did not directly cause a permanent change in the position of the vertebra. The adjustment served to stimulate the brain and nervous system. In turn, the nervous system, which exerts control over the body’s muscle and joints, caused the permanent movement of the bone to take place.”<sup>57</sup>

The intent of the research was to demonstrate the ability of a chiropractic adjustment to correct a vertebra’s mal- position. As his findings flew in the face of the established position of the chiropractic profession, they were not well received; the reason being that it stripped the dogmatic position of the profession (vertebral subluxation causes nerve interference) without offering any scientific alternative to support the validity of chiropractic.

Instead of seeing this research as potential for further studies regarding the relationship between the effects of the chiropractic adjustment and neurological response, the profession ignored his observations and returned to defending their staid position.

### **The current direction of the profession toward the medical model**

The pressure for acceptance by the controller of health care worldwide has taken its toll on the chiropractic profession. As medicine controls not only public opinion but education as well, there is little room for any level of opinion or counter-thinking outside of reductionism medicine.

Monetary survival has become the driving force in the direction of the chiropractic profession. Inclusion in the third- party payer system has forced chiropractors to use medical diagnosis in order to be reimbursed for service. This has lead to the need for research within the profession to center on the application of care toward a specific condition — such as chiropractic and duodenal ulcer, or dysmenorrhea, or AIDS.<sup>58,59,60</sup>

As the focus of chiropractic narrowed from vertebral subluxation, which was challenged since the beginning, to spinal conditions, posture, and now musculoskeletal disorders, so too has the research. In seeking the carrot of monetary survival, chiropractic has lost not only its direction but also its incredible potential in the developing neuroscience field. The question today is whether the chiropractic profession is willing to accept change in its outdated and misdirected concepts.

## **The cost of misdirection**

While the profession has been realistic in recognizing that it would not replace medicine as mainstream health care, it took pride in the position of being number one in the alternative health care field. The chiropractic shift toward the medical model has weakened this position to the point where chiropractic is no longer mentioned when there are discussions about alternative approaches.<sup>61</sup>

Financial reports continue to show a decline in the public's use of chiropractic services.<sup>62</sup> Today we continue to see coverage cutbacks in chiropractic services from third-party payers.

The public now views chiropractic services limited to back pain or spinal care. Those DCs who have blended into the medical model find themselves in the same category as physical therapists, and their care is dictated by medical professionals. We continue to see the closure of chiropractic practices as the marketplace for musculoskeletal disorder services has become saturated with other types of practitioners.

As other health professions moved into the mechanical spinal model, we have restricted our scope of practice, increased our dependence on third-party payers and limited our research to medical conditions. This is not unique to chiropractic in the United States. It is happening around the world.

## **Current events**

With the British Chiropractic Association (BCA) Statement on Vertebral Subluxation Complex,<sup>63</sup> we have the first professional chiropractic association to finally take a stand on the use of the old definitions and concepts of chiropractic.

They clearly state: "The BCA supports and encourages the inclusion of chiropractic in mainstream healthcare provision in the UK. To facilitate the integration of chiropractic, unsubstantiated historical concepts and ambiguous terminology must be discarded in favor of an emphasis on delivering an evidence-based care model that is easily understood by other members of the healthcare team."

While this deals with the old non-supported definition of vertebral subluxation complex, their position offers little beyond manual medicine or manipulative therapy for the future of chiropractic. Nor does it offer any direction to develop research to explain why chiropractic has shown remarkable results in immune system response or its effectiveness in health improvements in the research already referenced.

The position paper of the BCA reflects the general movement toward restricting chiropractic to the musculoskeletal model so that it can operate within the medical system, and offers no other alternative. At the same time, the traditionalists continue to defend a 100-year-old theory that has not evolved with the availability of new findings in neuroscience.

It is time for the profession to revisit the basic concepts of chiropractic with the application of modern knowledge and the use of 21st-century technology in order to secure a future in the field of "functional neurology."

Today we can now prove, using "evidence-based" care and accepted up-to-date neuroscience, that chiropractic plays a major role in the correction of health challenges and the stability of neurological balance.

Like it or not, medicine, as well as those in the chiropractic profession who still insist on following out-of-date concepts, will have to deal with these facts. Gone are the days of vertebral subluxation and nerve root interference as the cause of disease. Those who continue to move the profession toward the mechanical model will limit the profession to back and neck pain reduction and will fall under the control of the medical profession.

Today neurologically based chiropractic can stand on the latest findings in neuroscience and objective evidence-based outcome measures. Today there is no question of the effectiveness of chiropractic adjustments to alter central nervous system function, which in turn alters motor responses in the body.

Instrumentation now exists that provides ongoing objective outcomes, either immediately or over time, which proves the power of the adjustment to change neurophysiology. The new science of chiropractic has arrived. The question now is whether the medically driven segment and the historically held sides will continue to stay in a defensive posture, or will they move to build a future together.

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