

# **Redefining Subluxation: A Tonal and NeuroSpinal Paradigm for Modern Chiropractic**

## **1. Executive Summary**

Chiropractic is evolving—and so must our understanding of subluxation. For over a century, the profession has largely focused on the vertebral subluxation: bones misaligned or fixated, interfering with neural communication through compression. While this model served as a structural foundation, modern research and clinical insights now reveal a deeper, more global phenomenon at play.

This white paper introduces and substantiates a paradigm shift: that subluxation is fundamentally a state of aberrant tone in the NeuroSpinal system—a system comprised of

the brain, spinal cord, multilayered meningeal membranes, and their dural attachments throughout the cranium and spine. When this system becomes overwhelmed by physical, chemical, or emotional stress, it contracts. That contraction generates aberrant tension—disrupting communication, limiting adaptability, and fragmenting the body’s coherence long before bones ever misalign.

The model presented here—Talsky Tonal Chiropractic (TTC)—builds upon decades of clinical practice, foundational chiropractic theory, and modern neuroscience. It recognizes that vertebral subluxation is not the primary interference, but rather a compensatory adaptation to global neurological tension. In this model, the correction does not come through force, mobilization, or structural fixation—it comes through informational input, delivered through precise, non-articular contact aligned with the vector of ease.

Supported by research from Breig, Ward, Haavik, Oschman, and others, TTC reframes the chiropractic adjustment not as a mechanical correction, but as a neurological communication—a touch-based dialogue with the intelligence of the body.

This paper will:

- Trace the historical evolution of tonal chiropractic thought
- Present the anatomical and physiological basis of the Cranio-Spinal Meningeal Functional Unit (C-SMFU)
- Examine the distinction between osseotonal and direct tonal engagement
- Explore the information-driven pathways through which the body organizes, adapts, and corrects
- Clarify how TTC integrates with and enhances existing chiropractic techniques

In doing so, we aim to offer a lens for the future of principled chiropractic: one that is precise, neurologically grounded, and built on the body's innate capacity for self-adjustment and optimization.

## **2. Background & Historical Models**

The concept of subluxation has been foundational to chiropractic since its inception. Early chiropractic defined subluxation primarily in structural terms: a vertebra misaligned, putting pressure on a spinal nerve, and thus interfering with the expression of innate intelligence. This bone-on-nerve model served as a cornerstone of chiropractic philosophy and practice throughout the 20th century.

Yet from the beginning, there were whispers within the profession that something more was happening—something beyond bones and mechanical fixation. Over time, pioneers within chiropractic began observing that the nervous system's tone, coherence, and adaptability were primary indicators of function and health. Subluxation, they suggested, might not be merely structural—it might be tonal.

## **2.1 Traditional Subluxation Model**

The vertebral subluxation has historically been understood as:

- A misalignment or fixation of one or more spinal vertebrae
- Interfering with nerve transmission via mechanical compression or irritation
- Causing downstream dysfunction and dis-ease in the body

This structural model led to analysis techniques such as motion palpation, radiographic evaluation, and segmental listings—tools still used today. However, it lacked a mechanism for understanding how stress, adaptability, and neurological tone fit into the broader picture.

## **2.2 The Compression Myth and the Rise of Tonal Insight**

Modern neuroscience has begun to refute the longstanding notion that nerves are typically compressed by misaligned bones. Research by Dr. Heidi Haavik and others shows that interference is more often the result of

tension, distortion, and altered afferent input, rather than direct compression (Haavik & Murphy, 2007).

Earlier than that, Dr. Alf Breig had already demonstrated that the meningeal system and spinal cord could be adversely affected by mechanical tension, even without any direct vertebral displacement. His work marked a major shift from a compression-based paradigm to a tension-based interference model (Breig, 1978).

## **2.3 Historical Tonal Contributions**

Before chiropractic fully understood what it was observing, several techniques began to emerge with a tonal awareness:

- Logan Basic Technique recognized subtle shifts in postural tone and sought to influence global alignment through low-force sacral contacts.
- Toftness Technique introduced tonal principles using electromagnetic field detection to locate interference patterns in the nervous system.

- Directional Non-Force Technique (DNFT), founded by Dr. Richard Van Rump, was one of the first to use leg checks and pressure testing as reflexive indicators of tonal disturbance.
- Thompson Technique later adopted and expanded these indicators within a structural framework.
- Network Spinal Analysis (NSA) developed a fully tonal system of analysis and application based on somatopsychic wave dynamics and entrainment—a major philosophical departure from force-based correction.
- Upper Cervical Chiropractic applied the dentate ligament theory to understand how small misalignments at C1 or C2 could create massive tension within the dural system and central nervous system (Grostick, 1973).

## **2.4 Emergence of the NeuroSpinal Model**

In the late 20th century, Dr. Marvin Talsky began connecting the dots between these tonal perspectives and

the anatomical-functional model proposed by Breig and Ward. In 1995, he co-founded Torque Release Technique, which used segmental contact with tonal intent to influence global tone. By 2001, this evolved into Talsky Tonal Chiropractic, marking a departure from joint-space-based input and initiating the development of a truly non-articular, tonal protocol that engaged the Cranio-Spinal Meningeal Functional Unit (C-SMFU)—now known as the NeuroSpinal system.

This shift laid the foundation for a new understanding of subluxation: not as a vertebral event, but as a global shift in tone, resulting in compensatory vertebral misalignment.

### **3. Scientific Foundation of the NeuroSpinal System**

The human nervous system is suspended, supported, and protected by a continuous, intelligent membrane system known as the cranio-spinal meningeal system. This system consists of the dura mater and its layered membranes, which envelop the brain and spinal cord and

attach to key bony landmarks of the cranium and vertebral column. When understood as a single functional continuum with the central nervous system, this structure forms what we call the Cranio-Spinal Meningeal Functional Unit (C-SMFU)—also referred to as the NeuroSpinal system.

Modern chiropractic models must take this functional unit into account—not just in terms of structure or protection, but as a dynamic, contractile, and information-sensitive system with the ability to influence tone, perception, and adaptability.

### **3.1 Anatomy of the NeuroSpinal System**

The NeuroSpinal system includes:

- The brain and spinal cord
- The pia mater (the innermost layer of the meningeal system)

- The arachnoid space, including the cerebrospinal fluid that fills the space
- The dura mater (the outermost meningeal layer)
- The attachments of the dura to movable bony structures of the cranium and spine

Additionally, the dura exhibits a continuous extension into the peripheral fascial system via the outer sheath of the dura, creating a direct link between central neurological tone and global fascial tone throughout the body.

This system is not a loose sheath—it is a tensegral structure that supports posture, regulates cerebrospinal fluid dynamics, and modulates tone across the entire spine and body. Its structural and neurological integration makes it a central mediator of how the body perceives and responds to stress.

### **3.2 Contractile Motility and Aberrant Tension**

As early as 1960, neurosurgeon Dr. Alf Breig described the spinal cord and its surrounding membranes as having adverse mechanical tension when subjected to stress or distortion. In his seminal 1978 work, *Adverse Mechanical Tension in the Central Nervous System*, Breig demonstrated that the spinal cord could not only be elongated and twisted under tension, but that these distortions led to observable neurological changes—even without direct vertebral misalignment (Breig, 1978).

These findings confirmed that the dura mater and spinal cord possess their own motility and are susceptible to tension-based interference. This concept was further advanced by Dr. Lowell Ward, who described the spine as a system of spinal stress dynamics, showing that compensatory patterns develop to accommodate subtle dural and cord tension (Ward, 1980).

Together, Breig and Ward laid the anatomical and physiological foundation for what would become the NeuroSpinal model of subluxation.

### **3.3 Distinguishing Features from Musculoskeletal or Joint-Centric Models**

While most chiropractic models focus on vertebrae, joints, and associated muscles, the NeuroSpinal system introduces a higher-order functional architecture. It is:

- Neurologically central: directly connected to brain and spinal function
- Tonally responsive: contracts or relaxes based on perception of stress
- Globally influential: tension in one region affects the entire system
- Non-articular: it does not require joint movement for activation or correction
- Information-sensitive: tone, distortion, and release alter sensory processing

This system acts as a central switchboard for stress adaptation, which is why tension here must be viewed not

as a local biomechanical dysfunction—but as a global physiological event.

### **3.4 From Biotensegrity to Bioenergetics**

Work from researchers such as James Oschman and Robert Becker has expanded our understanding of non-synaptic communication and information transfer through connective tissue. Oschman's concept of liquid crystal fascia—and Becker's findings in *The Body Electric*—show that information is transmitted through the body via mechanical and electromagnetic signals, including through the dura mater (Oschman, 2000; Becker & Seldon, 1985).

These signals travel:

- At the speed of sound (through mechanical wave propagation in tissue)

- At the speed of light (through photonic signaling and electromagnetic fields)

The NeuroSpinal system participates in both. These findings confirm that the primary interface for intelligent correction is not the vertebra—it is the NeuroSpinal system itself.

#### **4. Mechanism of Subluxation: Aberrant Tension Over Fixation**

In the traditional chiropractic model, the vertebral subluxation was seen as the initiating problem: a misaligned or fixated vertebra causing mechanical interference to a spinal nerve. Over time, the structural fixation model evolved to include neurological components, but the mechanistic lens remained largely segmental and vertebra-focused.

However, modern research and clinical observation show us that vertebral subluxation is not the cause—it is a

compensation. It is the visible, structural response to a deeper, global shift in tone occurring within the NeuroSpinal system.

When the body becomes overwhelmed by stress—physical, chemical, or emotional—it does not immediately misalign a bone. Rather, it reacts with a neurological contraction. The Cranio-Spinal Meningeal Functional Unit (C-SMFU) contracts inward in defense, creating patterns of aberrant tension within the core of the system.

This is the mechanism of subluxation: a contraction in the tone of the NeuroSpinal system, which alters perception, limits adaptability, and initiates downstream compensation through structural changes.

#### **4.1 Aberrant Tension: The First Physiological Response**

Aberrant tension arises not from injury alone, but from the inability to adequately adapt to internal or external stress. This system-wide contraction alters tone globally—impacting:

- Sensory processing
- Postural integrity
- Motor control
- Segmental range of motion

This is not a passive event. The NeuroSpinal system actively withdraws from its previously organized state as a protective strategy to reduce the amount of information being processed—like a circuit breaker with a dimmer switch, turning down sensory bandwidth in the face of perceived overload.

The body holds this defensive tone pattern until it receives the corrective information necessary to release it.

## **4.2 Compensation, Not Causation**

As the system tightens, the brain instructs the musculoskeletal system to adapt. Vertebrae rotate, wedge, fixate, or lose tone—not because they are the origin of the dysfunction, but because they are responding to the primary neurological contraction.

This is why the vertebral subluxation is not the primary subluxation. It is the visible, secondary adaptation to an invisible, primary shift in tone.

In many cases, there may be no detectable joint fixation at all—but the nervous system is still in a globally subluxated state.

You cannot find the primary cause of interference at the vertebra if the

contraction lives in the tone of the NeuroSpinal system.

### **4.3 The Problem with Fixation-Focused Analysis**

Chiropractic today—even within neurologically focused communities—often revolves around locating the “primary fixation”: the one segment presumed to be creating compensatory patterns throughout the spine.

This pursuit is based on the assumption that if you adjust the one “driver,” the system will unravel.

But if the true primary is a global contraction, then adjusting fixations alone will only:

- Address surface-level compensations
- Reorganize the system only around the contraction

- Miss the opportunity to facilitate deeper neurological release

This explains why structurally focused techniques may achieve lasting adaptive reorganization to a certain extent, but eventually reach a plateau. This limitation gives rise to the concept of maintenance care in structural chiropractic. The reason is not that these methods are ineffective, but that they are not engaging the core mechanism—the aberrant tone within the NeuroSpinal system—directly.

Because structural adjustments work primarily through joint spaces and musculoskeletal compensation, they can help the system reorganize around a state of global contraction, but they do not typically initiate the level of ongoing neurological unwinding and optimization that becomes possible when tone itself is addressed at its source.

## **4.4 Shifting the Focus: From Fixation to Function**

The Talsky Tonal model offers a new mechanism: the subluxation is a state of sustained aberrant tension in the NeuroSpinal system.

From this perspective:

- Vertebral misalignment is not the interference—it is the adaptation
- Joint fixation is not the problem—it is the output
- Adjustments should not force correction—they should facilitate information flow

When we locate the best window in and deliver the least amount of the most effective input, the body doesn't need to be adjusted—it begins adjusting itself.

This shifts chiropractic from a force-based correction model to an information-based facilitation model, where

we engage with tone, not position, and function, not fixation.

## **5. The Talsky Tonal Chiropractic Model**

The Talsky Tonal Chiropractic (TTC) model represents a profound shift in how chiropractors engage with the nervous system. Rather than focusing on vertebral position or joint fixation, TTC focuses on global tone within the NeuroSpinal system—the cranio-spinal meningeal functional unit (C-SMFU).

This model views subluxation not as a structural anomaly to be corrected, but as a state of adaptive contraction—a functional distortion in the body’s central communication system. Correction, then, is not about moving bones or mobilizing joints. It’s about delivering information in the right way, at the right place, and with the right intent, so that the body can reorganize itself.

## **5.1 TTC Is a Model, Not Just a Technique**

TTC is best understood as a model and paradigm—a way of viewing and interacting with the body's adaptive intelligence. It includes:

- A comprehensive understanding of the mechanism of subluxation
- A protocol for analyzing global tone through tonal indicators and pressure testing
- A non-articular method of contact and communication
- And a shift in intent—from forcing change to facilitating intelligent reorganization

The TTC model can enhance existing techniques or be practiced on its own. Its insights about tone, vector, and communication can be integrated into many approaches, including structural, osseotonal, and tonal systems.

TTC is not a rejection of other techniques—it's a completion of the picture. It fills in the missing piece: how to interact directly with the tone of the NeuroSpinal system.

## **5.2 The Best Window In**

At the heart of TTC analysis is the search for the “best window in.” This is the specific location, direction, and line of correction through which the body is most receptive to change.

Through tonal pressure testing, reflex indicators, and observation, the practitioner locates the point at which the entire system shows a moment of balance—usually for about six seconds. This is the system's way of saying: “That's the input I need to begin unwinding.”

Only one point, in one direction, will yield that full system response. The rest may produce partial responses or none at all.

This phenomenon cannot be fully explained by mechanics. It is an informational exchange, influenced by the practitioner's intent and awareness. It reflects a principle supported by quantum biology: the system responds to how it is observed, engaged, and communicated with.

### **5.3 Input in the Direction of Ease**

The TTC adjustment is a non-articular input given:

- At the subluxation focal point (the best window in)
- In the direction of ease (parallel to the vector of aberrant tension)
- With corrective intent (to facilitate re-initiation of self-adjustment)

This is known as the vector of unwinding.

When this contact is made with congruent tone, presence, and intent, the NeuroSpinal system begins to unwind, reorganize, and restore coherence.

The body doesn't need to be adjusted—it needs to be informed. Once it receives the information it was missing, it knows what to do.

## **5.4 Communicating with Intelligence**

TTC seminars show chiropractors how to communicate directly with the intelligence of the body through tone.

95% of the time, bones are out of place because the body thinks they need to be.

The body is holding them that way because it got overwhelmed—and now it's stuck in that pattern.

It's not waiting to be thrown back into place.

It's waiting for information, permission, and space to re-initiate its own process of self-adjusting.

The TTC model honors the idea that the body is not broken.

It is intelligent—but it may be missing what it needs in order to adapt more effectively.

Chiropractic doesn't need more force—it needs more precision, communication, and reverence for the intelligence of the system

## **6. Communication Pathways and the Role of Information**

At the core of the Talsky Tonal model is a fundamental question:

What is the body missing when it can't adapt?

It's not force.

It's not mobility.

It's information.

When the NeuroSpinal system becomes overwhelmed, it contracts. This contraction:

- Decreases range of motion → resulting in missing information
- Alters tone and perception → resulting in misinformation

Together, these two distortions mean that the body is no longer receiving or interpreting reality accurately. It doesn't know the stress has passed. It doesn't know it's safe to unwind. It is no longer operating in the present—it's operating from a pattern held in tension.

This is why the body holds subluxation patterns that are no longer necessary. Not because it wants to, but because it doesn't know that it doesn't need to.

The body is not waiting for an adjustment.

It's waiting for the right information—delivered through the right window, with the right tone, through a system it can still hear.

## **6.1 How the NeuroSpinal System Communicates**

The NeuroSpinal system communicates via:

- Neurological synaptic transmission (traditional nerve conduction)
- Mechanical tension (biomechanical signaling through connective tissue)

- Electromagnetic and photonic signaling (biofield interactions)

Recent research by Oschman (2000) and Becker & Seldon (1985) demonstrates that:

- Mechanical signals propagate at the speed of sound through fascia and dura
- Bioelectromagnetic signals travel at the speed of light, utilizing light-sensitive biocommunication pathways

These non-synaptic pathways are:

- Faster
- Broader in bandwidth
- Less prone to bottleneck
- Active within the dura and the connective tissue network of the NeuroSpinal system

This is why light touch delivered in the correct vector and location can initiate global reorganization—when that touch communicates through these channels.

## **6.2 The Role of Dura and Inner Fascia**

The dura mater is not just protective connective tissue. It is:

- Electrically conductive
- Mechanically sensitive
- Connected continuously into the fascia system of the body (via the outer sheath of the dura)

When a practitioner delivers an adjustment with precision, awareness, and tonal intent into the best window in, the signal is received by this intelligent membrane system—and communicated globally. The entire NeuroSpinal system has the capacity to respond to this vibrational, informational input.

The practitioner is not forcing correction.

They are creating a shift in tone.

They are speaking the body's language.

The body doesn't need noise—it needs signal.  
TTC helps reintroduce signal into a system  
distorted by noise.

## **7. Clinical Implications**

Understanding subluxation as a state of aberrant tension within the NeuroSpinal system changes everything about how we analyze, adjust, and care for the nervous system.

In this model, the chiropractor is no longer searching for what is out of place.

They are searching for where the system is most ready to receive information.

This requires a different type of listening, a different method of analysis, and a different intention behind the adjustment.

## **7.1 Identifying the Global Subluxation**

TTC practitioners begin by assessing the global tone of the NeuroSpinal system. This involves:

- Observing posture, breath, balance, tone, and energy
- Using tonal pressure testing to ask the body where it wants to be engaged
- Identifying the best window in—a location and direction through which the entire system momentarily balances

Unlike motion palpation or segmental listings, this is not about identifying a fixation. It's about finding the point of highest receptivity in the system.

## **7.2 Facilitating Receptivity, Not Forcing Change**

The adjustment in TTC is not a correction—it is an invitation.

When input is delivered in the correct vector, at the best window in, with tonal intent, the system:

- Acknowledges the input
- Begins to unwind
- Reorganizes from the inside out

The chiropractor is not “fixing” the body.  
They are facilitating the body’s ability to adjust itself.

This approach helps the patient develop not only better organization—but greater self-regulation and adaptive resilience over time.

## **7.3 Clinical Outcomes: From Fixation to Optimization**

TTC doesn't aim to simply restore motion or correct structure—it aims to:

- Release held tension patterns in the nervous system
- Restore coherent tone in the NeuroSpinal system
- Reestablish adaptability, plasticity, and wholeness

This is not just about resolving symptoms—it's about upgrading function.

Over time, patients under TTC care demonstrate:

- Improved posture and balance

- Decreased emotional reactivity
- More efficient adaptation to stress
- Greater awareness of their own body
- Spontaneous structural correction without forceful input

The goal is not maintenance—it is never-ending optimization.

This is what becomes possible when we engage the primary.

## **8. Conclusion**

The chiropractic profession has long honored the body's innate intelligence. But our understanding of how to engage that intelligence—of how subluxation truly works—must continue to evolve.

The evidence is clear: subluxation is not a bone out of place interfering with a nerve through compression.

It is a state of aberrant tension in the NeuroSpinal system—arising from the body's inability to adequately adapt to stress.

This tension alters tone, perception, and function—long before any joint fixation is present.

And while vertebral subluxations are real, they are often secondary compensations to a deeper, global neurological contraction.

Talsky Tonal Chiropractic invites the profession to explore a new model:

- One that is grounded in functional neurology, neuroanatomy, and emerging research
- One that respects the tonal roots of chiropractic
- One that shows us how to communicate directly with the body's intelligence through precision, tone, and touch

This is not just a technique.

It is a paradigm shift—a model that can enhance other methods, or stand alone as a complete tonal system.

It begins with a simple question:

What if the real mechanism of subluxation has been hiding in plain sight?

The body is not waiting for force. It's not waiting for fixation to be corrected.

It's waiting for accurate information, delivered with reverence and clarity, so it can begin to reorganize from within.

If we engage the tone of the NeuroSpinal system with precision, awareness, and intent, we don't just help the body adapt.  
We help it evolve.