

## Talsky Tonal Chiropractic White Paper

Redefining Subluxation: A Tonal and NeuroSpinal Paradigm for Modern Chiropractic

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### Section 4: Mechanisms of NeuroSpinal Subluxation

Subluxation begins the instant threat is perceived; everything after that—tension, joint fixation, dysafferentation—is a cascade held in place until better information arrives.

Perception of Threat → Meningeal Bracing Response:

Actual or perceived stress triggers a meningeal bracing response in the NeuroSpinal System. This initiates fibroblast to myofibroblast conversion via TGF- $\beta$ 1 signaling, increasing contractility in the pia mater, dura mater, and associated fascial continuities. The contractile tone is held until mechanical and informational safety cues arrive.

Informational Interference Mechanism:

While defensive tone is maintained, informational flow to and from the CNS is constrained. Sensory input loses variability and fidelity, axoplasmic and cerebrospinal fluid dynamics can be altered, and cortical processing becomes biased toward protection. This reduces the informational range available for adaptive response.

Permission to Unwind:

The release of protective tone requires three converging inputs—mechanical congruence, informational congruence, and physiological state shift. When these align, the CNS updates its threat model, reopens sensory bandwidth, and reorganizes tone toward adaptability.

Anesthesia Analogy:

Under anesthesia, the stretch reflex and threat appraisal circuits are silenced, allowing immediate increases in range without tissue damage. Subluxation operates similarly at a global NeuroSpinal scale—limitations are neural, not purely mechanical.