2026

Preventing Medical Errors Through Whole-Being Care

Integrative Strategies for Personalized Care

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Thank you, Sponsors

Current Global Burden of Disease

- Global DALYs (disability-adjusted life-years) increased from **2.63 billion in 2010 to 2.88 billion in 2021** for all causes combined.
- In 2021, COVID-19 was the leading cause of DALYs globally, followed by ischaemic heart disease, neonatal disorders, and stroke.

Top 10 Causes of DALYs, United States of America, 2021

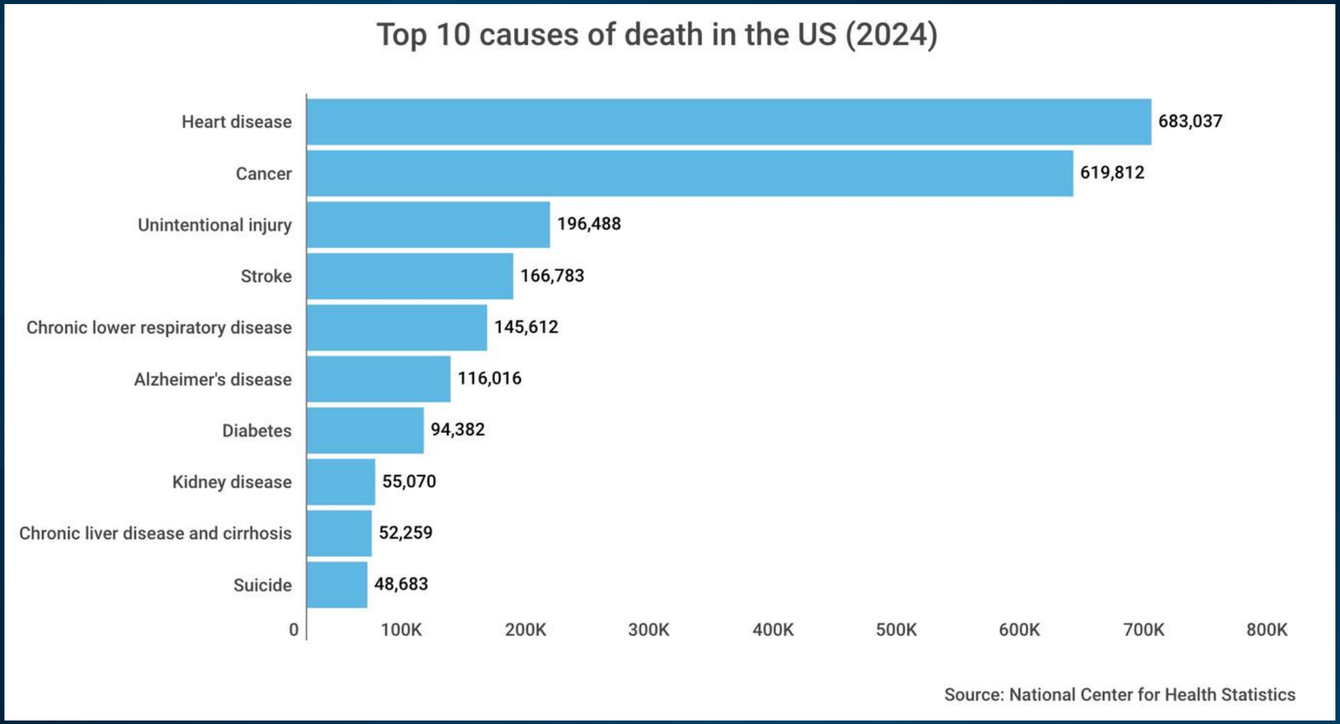
Cause	Value	Category
COVID-19	3672.89	Communicable
Ischaemic heart disease	3635.28	Non-communicable
Drug use disorders	3308.34	Non-communicable
Diabetes mellitus	1704.49	Non-communicable
Back and neck pain	1577.34	Non-communicable
Road injury	1287.05	Injuries
Chronic obstructive pulmonary disease	1242.77	Non-communicable
Self-harm	1173.79	Injuries
Stroke	1088.03	Non-communicable
Trachea, bronchus, lung cancers	970.95	Non-communicable

World Health Organization

Source: The Lancet, Global incidence, prevalence, years lived with disability (YLDs), disability-adjusted life-years (DALYs), and healthy life expectancy (HALE) : a systematic analysis for the Global Burden of Disease Study 2021

Current Global Burden of Disease

- According to the National Center for Health Statistics, the top three causes of death in the US include **heart disease**, cancer and unintentional injury.



- An estimated **129 million** people in the US have at least **1 major chronic disease** (eg, heart disease, cancer, diabetes, obesity, hypertension) as defined by the US Department of Health and Human Services.
- Over the past 2 decades, prevalence has increased and this trend is expected to continue. An increasing proportion of people in America are dealing with multiple chronic conditions; **42% have 2 or more, and 12% have at least 5.**
- About **90%** of the annual **$4.1 trillion** health care expenditure is attributed to managing and treating chronic diseases and mental health conditions.

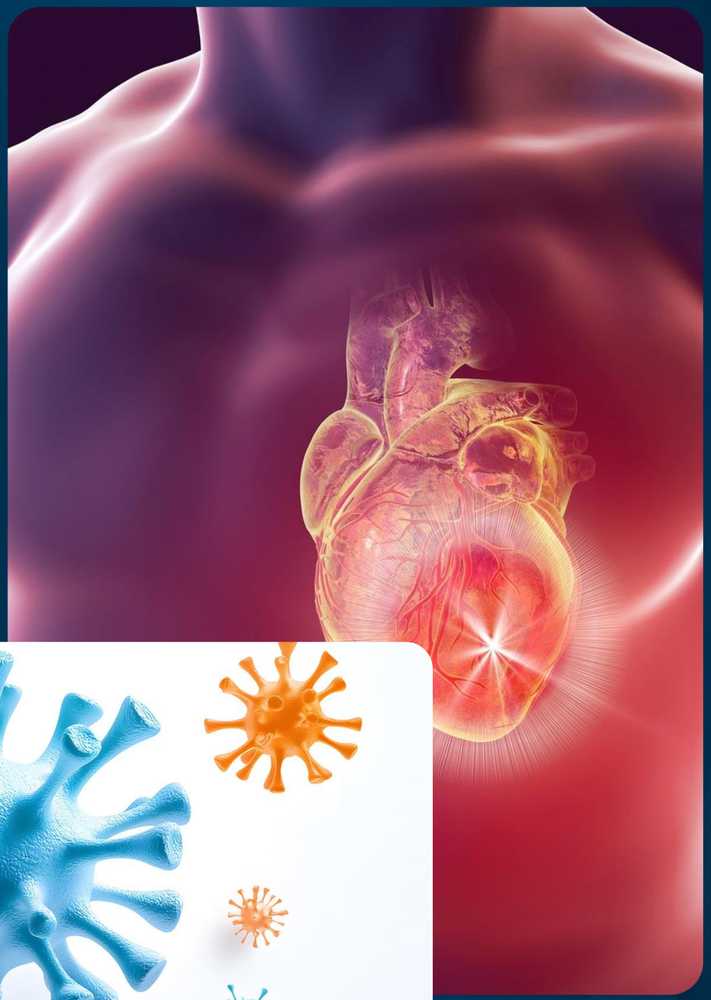
Source: CDC

The Rise of Chronic Disease: A Global Epidemic

Metric	1990 (approx.)	2019/2021 (approx.)	Perc Tren
Total NCD Deaths	~27 million	**43 million**	**~59** dea
Share of Total Deaths	57%	**74%**	Chr caus
Diabetes Prevalence	~150 million	**~530 million**	**~25** case
Metabolic Risk Factors	Baseline	—	**50%** hea

- Research from the *Global Burden of Disease* (GBD) study and the *World Health Organization* (WHO) indicates a **significant and steady rise** in the prevalence and mortality of chronic diseases—often termed Non-Communicable Diseases (NCDs)—over the last 30 years.

The Rise of Chronic Disease



- Diabetes & Kidney Disease: These saw the highest rise in incidence (up to **49.4%**) and prevalence in specific regions like the Eastern Mediterranean and the Americas.
- Metabolic Diseases: Disability-Adjusted Life Years (DALYs) for obesity and Type 2 Diabetes have increased at an accelerated rate, **doubling** in many regions since 2000.
- Cardiovascular Disease (CVD): Deaths from CVD increased by **97%** in South Asia and **47%** in East Asia between 1990 and 2013, largely driven by aging and lifestyle changes.

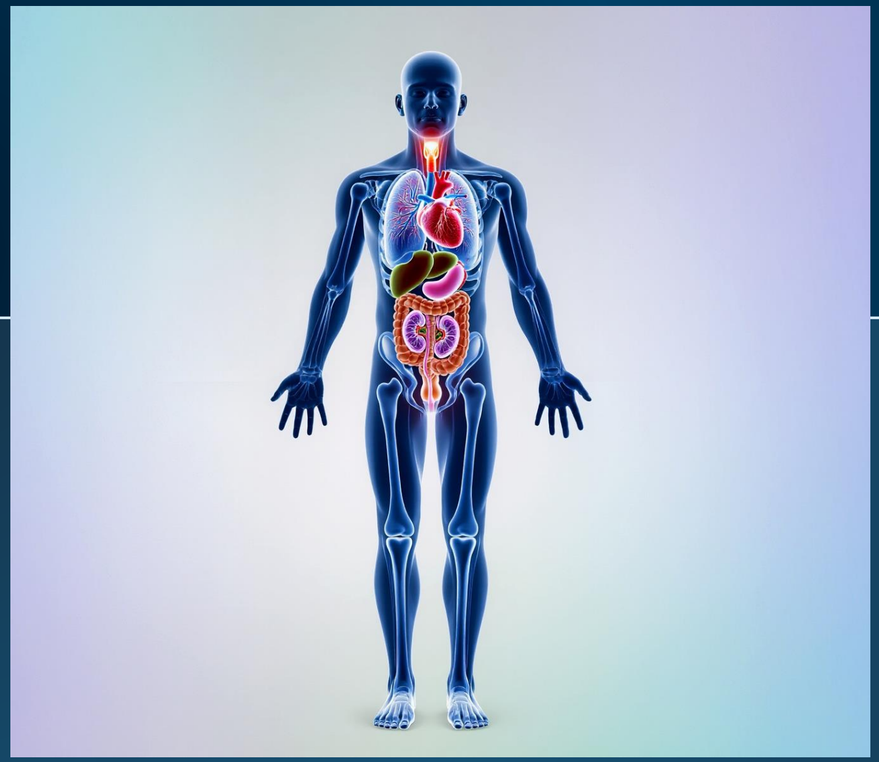
- Sources: Global, regional, and national burden of chronic kidney disease due to diabetes mellitus from 1990 to 2021: a systematic analysis for the Global Burden of Disease Study 2021

The Rise of Chronic Disease: Why is it happening?

- According to the WHO, four primary "metabolic changes" driven by lifestyle are responsible for this rise:
  - **Raised blood pressure** (The leading global risk factor).
  - **Overweight and obesity** (Increased BMI).
  - **High blood glucos**e (Diabetes).
  - **High blood lipids** (Cholesterol).

Neural Integrity — What It Is

- **Definition:** Optimal structure and function of the nervous system enabling adaptability and coherence
- The nervous system as the "Director" of the body’s internal balance.
  - The Vagal Brake
  - Resilience via Allostasis
  - Central Integration
- Neural integrity influences immune, endocrine, metabolic regulation.
  - Neural-Immune Axis
  - Endocrine Orchestration
  - Metabolic Signaling



Coherence: Physically, Emotionally, Systemically

Physically: Efficient Movement, Posture, and Harmony

- Proprioception & Motor Control
- Postural Tone
- Physiological Harmony

Emotionally: Regulation, Resilience, and Clarity

- Affective Regulation
- The Window of Tolerance
- Cognitive Clarity

Systemically: Adaptive Homeostasis Across Organ Systems

- Cross-System Communication
- Allostatic Load Management
- Bio-Coherence

From Fragmentation to Coherence: A Health Paradigm Shift

Traditional Care Treats Symptoms

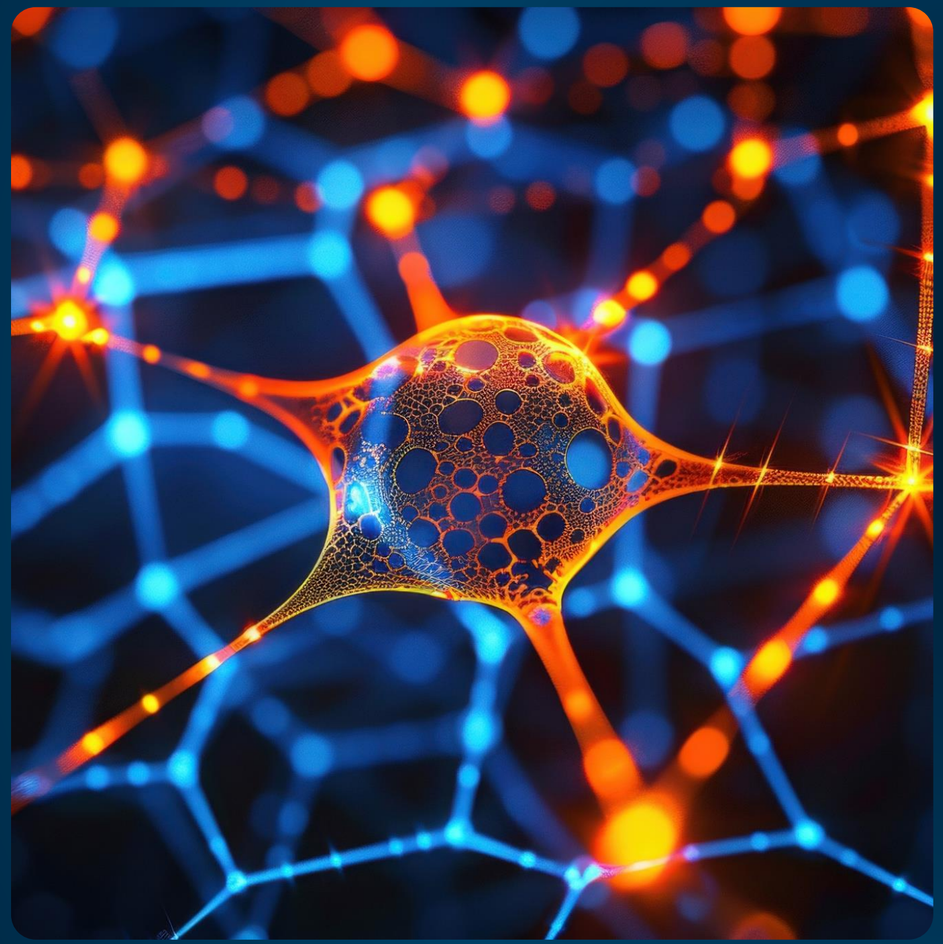
- Symptom Suppression vs. System Optimization
- The Feedback Loop
- Sustainability

Neural Integrity = Foundation for Personalized Resiliency

- The "Filter" of Experience
- Individualized Response
- Bio-Individual Capacity

Better Outcomes Through Improved Communication

- Intra-system vs. Inter-system
- Reducing "Biological Friction"
- Measurable Results



Neuroplasticity: Built for Adaptation

- Neuroplasticity is the process of "**neurons that fire together, wire together**." The nervous system physically changes the strength and number of connections (synapses) based on usage.
- Neuroplasticity is continuous.
  - Movement as Data
  - The Emotional Filter
  - The Power of Environment
- Health is Not Static; It’s Adaptive: Shifting the definition of health from a "state" to a "process."

How Chiropractic Adjustments Influence Neuroplasticity

Lelic, D. 2016. Manipulation of Dysfunctional Spinal Joints Affects Sensorimotor Integration in the Prefrontal Cortex: A Brain Source Localization Study

Haavik, H. 2012. The role of spinal manipulation in addressing disordered sensorimotor integration and altered motor control.

Adjustments provide novel, meaningful sensory input to the CNS. High-velocity, low-amplitude adjustments stimulate mechanoreceptors and muscle spindles, delivering a "**neurological reset**" of sensory data that clears interference and refreshes the brain's map of the body.

Sensorimotor Integration

Research demonstrates that these targeted inputs improve the brain's ability to accurately **perceive, move, and coordinate** the body by syncing the relationship between sensory "incoming" signals and motor "outgoing" commands.

Cortical Processing

Functional MRI and EEG studies indicate that neural adjustments can shift activity in the prefrontal cortex and somatosensory areas, enhancing the brain's "**executive**" ability to process information and manage stress.

Motor Control

By normalizing the neural drive to skeletal muscles, adjustments help **restore optimal tone and recruitment patterns,** reducing "compensatory" movements that lead to injury and chronic fatigue.

Research Article

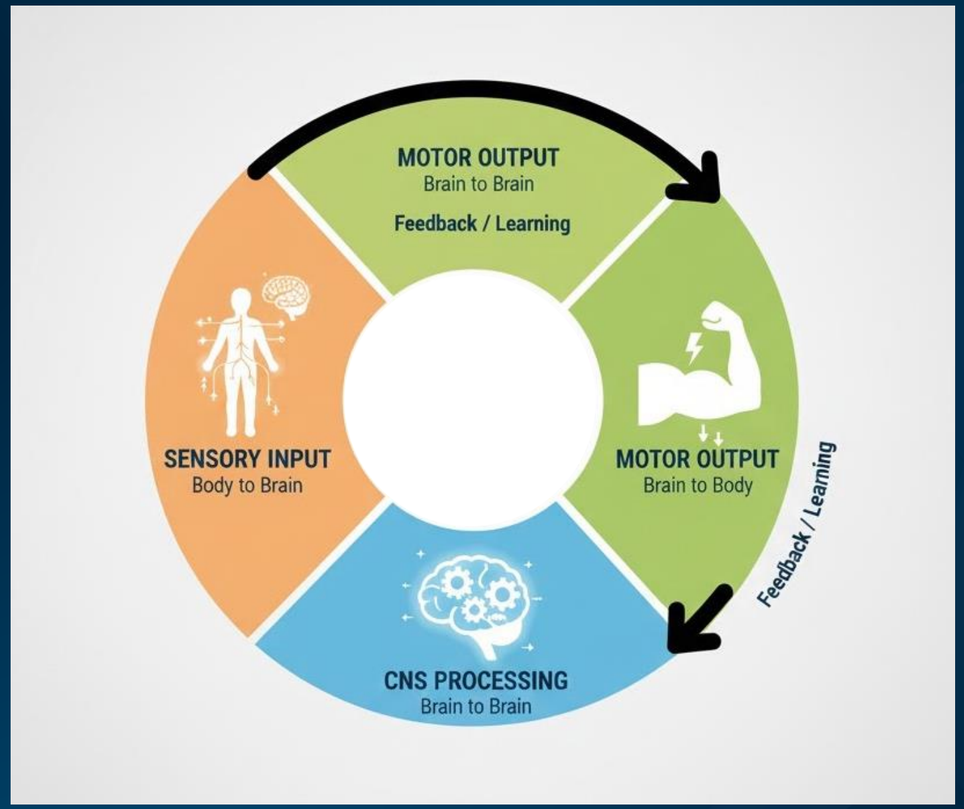
The role of spinal manipulation in addressing disordered sensorimotor integration and altered motor control

Heidi Haavik , Bernadette Murphy

- **Mechanism of Dysfunction:** The study proposes that "subclinical" spinal pain (pain that hasn't reached a clinical crisis) causes the brain to receive "smudged" or inaccurate sensory data, leading to disordered sensorimotor integration and maladaptive neural plasticity.
- **The "Neural Reset"**: The research highlights that spinal manipulation acts as a "neurological intervention" by providing high-fidelity sensory input that helps the central nervous system re-calibrate how it perceives the body's position and movement.
- **Improved Motor Outcomes:** Results demonstrate that the adjustment leads to measurable changes in cortical excitability and improved motor control, effectively "cleaning up" the communication between the brain and the musculoskeletal system

Sensorimotor Integration: How the Brain Knows the Body

- The CNS depends on accurate sensory input to regulate output. The brain requires high-fidelity, real-time data from the body to make precise decisions regarding muscle recruitment, balance, and organ function.
- **Poor joint motion, posture, or movement = distorted input.** Spinal dysfunction or "subclinical" pain creates "neurological noise" or "smudging," where the brain receives blurred sensory information about the body's actual position in space.
- Adjustments help refine **proprioceptive signaling.** By restoring proper segment motion, adjustments provide a "clean" burst of mechanoreceptive input that clears interference and updates the brain's internal map for more accurate motor control.



Source: Haavik, H., & Murphy, B. (2012). The role of spinal manipulation in addressing disordered sensorimotor integration and altered motor control. Journal of Electromyography and Kinesiology, 22(5), 768-776

Central Regulation: The Nervous System as Master Coordinator

- CNS integrates **physical, emotional, and environmental** signals
  - The Central Nervous System does not process signals in a vacuum; it constantly cross-references physical sensations with emotional states and environmental cues.
- Autonomic balance reflects neural integrity
  - Neural integrity is defined by **Autonomic Flexibility**—the ability to rev up (Sympathetic/Fight-or-Flight) when needed and settle down (Parasympathetic/Rest-and-Digest) when the stressor is gone.
- Dysregulation often precedes pathology
  - **Disease doesn't happen overnight.** It begins as Dysregulation (a functional mismatch in how the system communicates) long before it becomes a Pathology (structural damage visible on an MRI or blood test).

Threats to Neuroplastic Health

- **Physical:** posture, movement restriction, injury
- **Emotional:** chronic stress, trauma, unresolved experiences
- **Environmental:** screens, toxins, noise, sedentary habits
- Lifestyle mismatch with biology

Lifestyle Alignment: Sustaining Neural Coherence

Alignment between:

Biology & Behavior

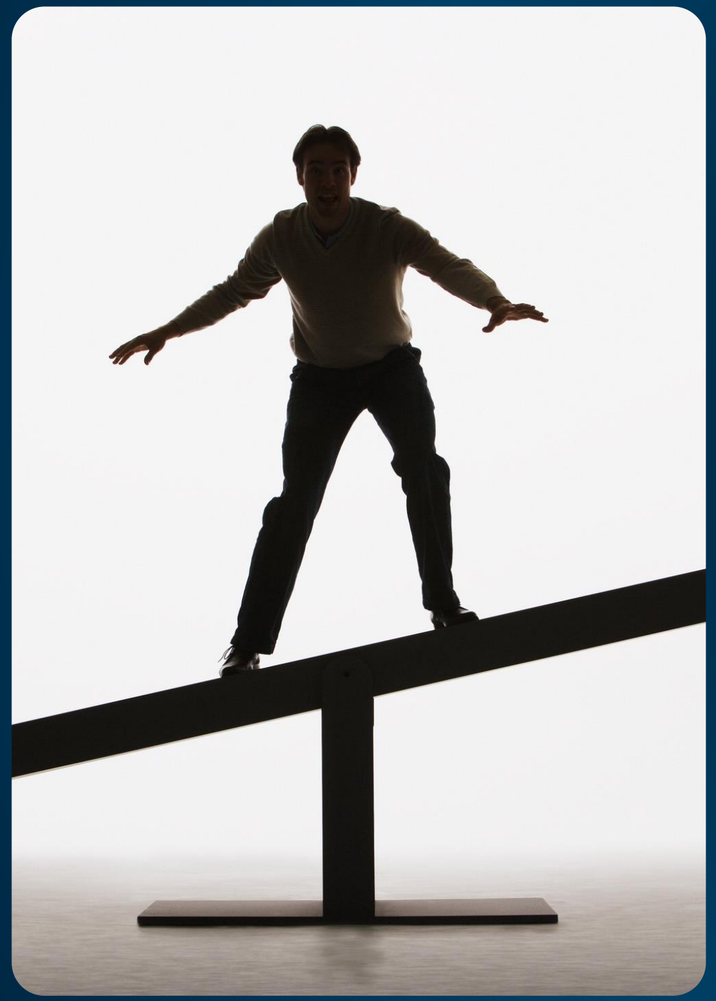
Structure & Function

Demands & Recovery

Chiropractic = Gateway to Aligned Living

How Do We Identify Disruption to Neural Integrity?

- **Look Beyond Pain**
  - Pain as a Late-Stage Indicator
  - The "Silent" Nervous System
- **Assess Adaptability, Regulation, and Coherence**
  - Adaptability (The Stress Test)
  - Regulation (The Thermostat)
  - Coherence (The Rhythm)
- **Patterns > isolated findings**
  - One high blood pressure reading or one tight muscle is an isolated finding. A pattern (e.g., high blood pressure + poor sleep + forward head posture) indicates a systemic "survival mode" in the nervous system.



Tools That Reveal Neural Stress Documentation

- **HRV (Heart Rate Variability)**
  - The Metric of Adaptability
  - Clinical Value: Research in *Frontiers in Psychology* identifies high HRV as a biomarker for "resilience".
- **Posture and Movement Analysis**
  - The Window to the CNS
  - Dynamic Assessment
- **Balance and Coordination Testing**
  - Proprioceptive Accuracy
  - Cerebellar Health
- **Range of Motion (ROM) Variability**
  - Quality over Quantity
  - Neurological Inhibition

Heart Rate Variability (HRV): The "Whole-Being" Window

The Easy Science

- **Not Heart Rate, but Heart Timing:** HRV measures the specific time variation between consecutive heartbeats.
- The Autonomic Balance Scale:
  - **High HRV:** Indicates a resilient, flexible nervous system that can easily switch between "Fight or Flight"
  - **Low HRV:** Indicates a nervous system "stuck" in stress, often associated with chronic pain, poor sleep, and systemic inflammation.

Whole-Being Data

- It moves the conversation from "How do you feel?" to "**How is your nervous system functioning?**"
- Patient-Friendly Technology:
  - **In-Office:** Simple 3-minute scans using professional HRV sensors.
  - **Remote:** Integration with wearables (Oura, Whoop, Apple Watch) allows you to track patient resilience between visits.
- Visual Proof of Progress: Easy-to-read graphs show the patient their "Autonomic Age" or "Stress Score," making the **value of long-term care plans immediately visible and documentable.**

The Whole Context Matters

Work & Home Environments

Physical surroundings (ergonomics, light exposure, noise) and psychological safety in the home/office act as the primary **"sensory diet"** that either reinforces a state of safety or triggers a constant, low-grade survival response.

Social Connection

Based on Polyvagal Theory, **positive social engagement is a biological requirement for health**; meaningful connection provides "co-regulation" that stabilizes the nervous system and lowers systemic inflammation.

Sleep Quality

Sleep is the **"biological car wash"** for the brain; poor sleep quality impairs the glymphatic system's ability to clear metabolic waste and prevents the nervous system from shifting into deep parasympathetic repair modes.

Stress Perception

It is not the stressor itself, but the **perception of threat** that triggers the HPA axis; a dysregulated nervous system often misinterprets neutral environment cues as "high-alert" signals, sustaining a state of chronic physiological tension.

Emotional Load

Chronic **emotional "weight"** acts as a persistent neural input that "tags" the body's physiology, often manifesting as physical bracing patterns or autonomic exhaustion (burnout).

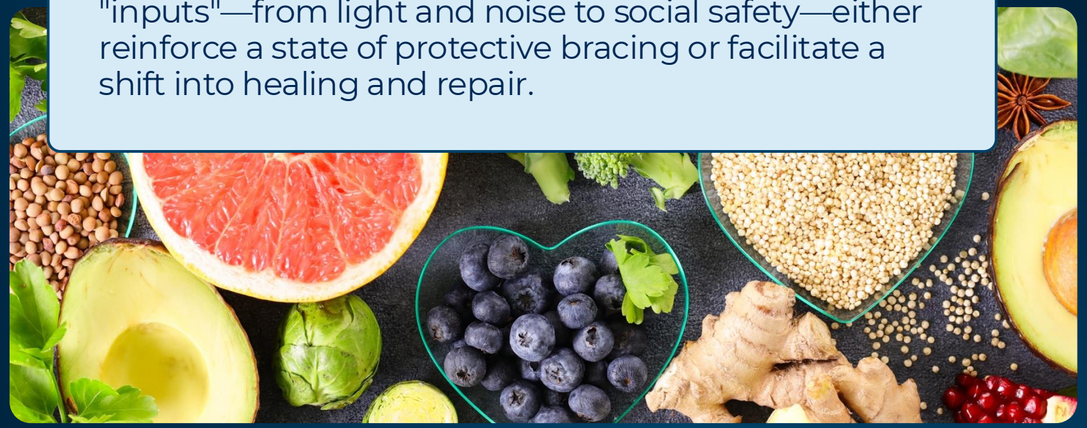
Health Is Shaped Beyond the Exam Room

Chronic Stress

rewires neural pathways. Prolonged **"survival signaling"** creates maladaptive plasticity, physically thickening the brain's fear centers (amygdala) while weakening the regions responsible for calm and logical regulation.

Environment

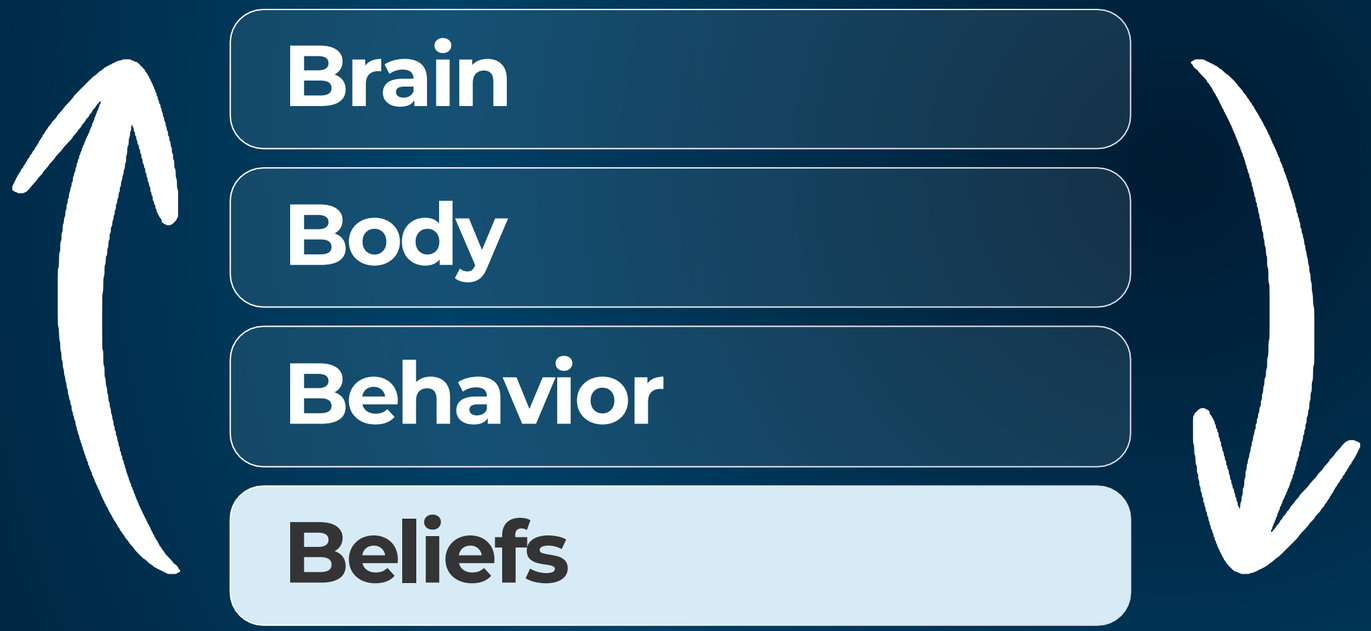
can amplify or calm the nervous system. The nervous system acts as a **continuous sensor**; environmental "inputs"—from light and noise to social safety—either reinforce a state of protective bracing or facilitate a shift into healing and repair.



Chiropractors

must see the whole picture. Clinical success requires moving beyond the spine to address the "Exposome"; **a perfect adjustment can be undermined by a lifestyle or environment** that keeps the patient's nervous system in a constant state of perceived threat.

The Adjusted Reality Framework



This framework;

- Moves beyond symptom suppression
- Supports personalized, sustainable change
- Positions chiropractic as foundational, not adjunctive

Health emerges when these are aligned

The Past Framework

Thoughts to Future

Trauma

Toxins

Thoughts

Pain

Poisons

Perceptions

Adjusted Interventions: Aligning the Whole Person

- **Chiropractic care as a first-line, drug-free strategy**. By addressing the root causes of neural dysregulation rather than suppressing symptoms, chiropractic serves as a primary portal for non-pharmacological health management.
- **Restores movement, input, and regulation.** The adjustment acts as a "neurological reset" by clearing joint restrictions, providing high-fidelity sensory data to the brain, and balancing the autonomic "gas and brakes."
- **Enhances capacity for healing.** Improving neural integrity shifts the body from a "survival-based" state to a "growth-based" state, lowering the allostatic load and allowing the system to direct energy toward cellular repair and immune function.

What the Research Shows

Pain Reduction

Goertz et al. (2018), JAMA Network Open.

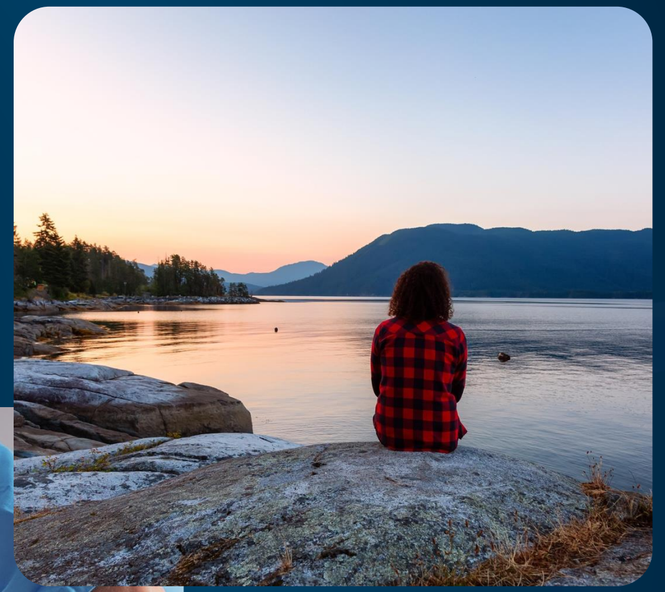
- In a large-scale clinical trial of 750 active-duty military personnel, those receiving **chiropractic care** alongside traditional medical care reported **significantly lower pain intensity and less disability** than those receiving medical care alone.
- The study highlights that the reduction is not just a "numbing" effect but a result of restored biomechanical function.

What the Research Shows

Improved HRV

Zhang et al. (2006), Journal of Manipulative and Physiological Therapeutics.

- This study demonstrated that spinal manipulation to the cervical and lumbar spine significantly **increased Heart Rate Variability** (HRV) and shifted the autonomic balance toward parasympathetic dominance (the "rest and digest" state).
- This proves that an adjustment is a **"neurological intervention"** that can calm the systemic stress response.



What the Research Shows

Mood & Performance

Lelic et al. (2016), Neural Plasticity.

- This is the landmark study showing a **20% change in Prefrontal Cortex** (PFC) activity post-adjustment.
- Since the PFC is the "CEO" of the brain—responsible for executive function, mood regulation, and impulse control, this research suggests that **adjustments enhance the brain's ability to process complex emotional and cognitive tasks.**

What the Research Shows

Functional Resilience

Haavik et al. (2017), Brain Sciences.

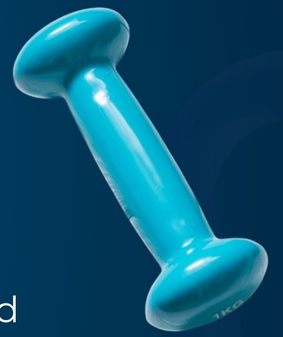
- Research showed a **16% increase in absolute muscle strength** (Maximal Voluntary Contraction) and a **45% increase in the "Cortical Drive"** (the brain's ability to recruit muscle fibers) following an adjustment.
- This demonstrates "functional resilience"—the system is more powerful and responsive to physical demands.

Supporting the Nervous System Beyond the Adjustment

Nutrition

- Neuro-Inflammation Control: **Prioritize Omega-3 fatty acids and antioxidants** to protect the myelin sheath and reduce oxidative stress within the Central Nervous System.
- The Gut-Brain Axis: Research shows that a **high-fiber, diverse diet** supports a healthy microbiome, which produces over 90% of the body's serotonin—a key neurotransmitter for mood and neural regulation.

Movement Variability



- Proprioceptive Enrichment: Move beyond repetitive "gym movements" to include **balance, rotation, and complex coordination**; this provides the "novel input" the cerebellum needs to stay sharp.
- BDNF Production: Purposeful, varied movement triggers the release of **Brain-Derived Neurotrophic Factor**, the "biological fertilizer" that supports neuroplasticity and new synaptic connections.

Supporting the Nervous System Beyond the Adjustment

Sleep Hygiene

- Glymphatic Clearance: Consistent sleep schedules allow the brain's glymphatic system to **"power wash"** metabolic waste (like amyloid-beta) that accumulates during waking hours.
- Autonomic Re-calibration: Deep sleep is the only time the nervous system fully disengages from sympathetic "**survival mode"** to facilitate systemic tissue repair and memory consolidation.

Stress Regulation

- Active Regulation: Practices like **diaphragmatic breathing or meditation** are "strength training" for the Vagus nerve, improving Heart Rate Variability (HRV) and the ability to self-soothe.
- Refining the Threat Response: **Intentional "stillness"** helps the brain distinguish between perceived emotional stress and actual physical danger, preventing the system from staying in a permanent "braced" state.

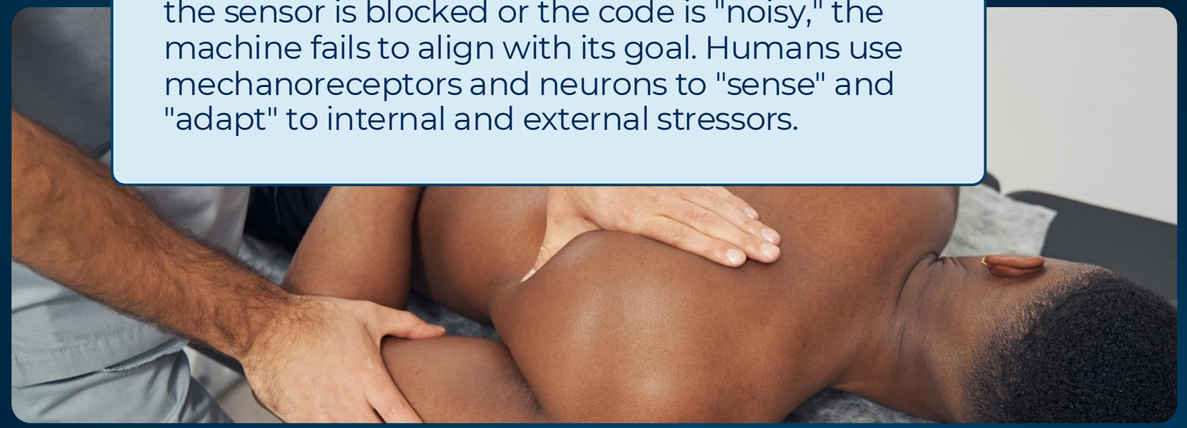
Adjusted Intelligence: Adaptive Systems in Action

Intelligence = Ability to Sense, Adapt, and Align

Intelligence begins with the accurate detection of environmental and internal data. A system is only as "smart" as the quality of the information it receives.

Applies to Humans and Machines

Machines use sensors (cameras, microphones) and algorithms to "sense" and "adapt" to data. If the sensor is blocked or the code is "noisy," the machine fails to align with its goal. Humans use mechanoreceptors and neurons to "sense" and "adapt" to internal and external stressors.

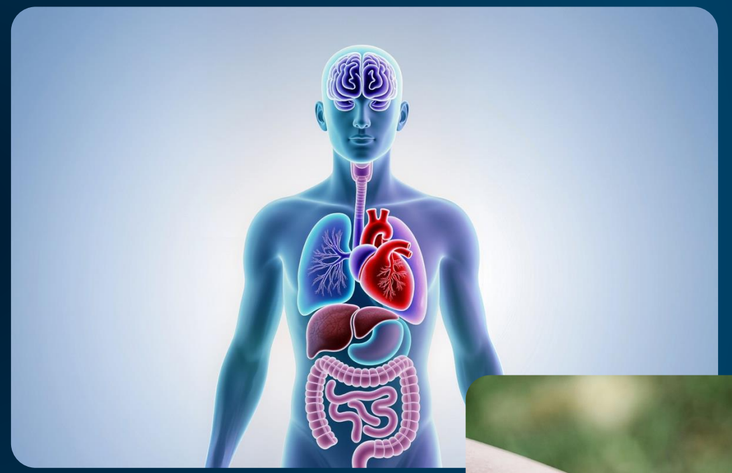


Chiropractic Enhances Biological Intelligence

Spinal adjustments remove the "neurological noise" (interference) caused by joint dysfunction, allowing the body's inborn intelligence to communicate clearly between the brain and every cell.

AI (Adjusted Intelligence)

- **From Artificial to "Adjusted Intelligence":** Merging clinical intuition with data-driven insights to provide precision care that is tuned to each patient's unique neuro-physiology.
- **Predictive Healthspan Mapping:** Using AI to analyze longitudinal data (like HRV and posture) to identify "functional bottlenecks" and intervene years before chronic issues manifest.
- **The Augmented Clinician:** Offloading "cognitive load" and administrative tasks to AI, allowing the doctor to focus entirely on the human connection and the art of the adjustment.
- **Real-Time Bio-Feedback:** Utilizing wearable tech and AI to provide patients with personalized "nudges" for lifestyle and stress management between office visits.
- **Architects of Human Potential:** Positioning DCs as the leaders of the longevity movement by using technology to document and prove the systemic benefits of chiropractic care.



Chiropractors as Cultural Leaders

Shift from Reactive to Proactive Care

- **The "Wait and See" Fallacy:** Traditional care often begins only after symptoms reach a crisis; proactive care focuses on maintaining neural integrity to prevent the "Allostatic Load" from accumulating in the first place.
- **Maintaining the Margin: Personalized** care is designed to keep the system's "adaptive margin" wide, ensuring the body can handle unexpected stressors (physical or emotional) without crashing into pathology.

From Fear-Based Messaging to Empowerment

- **Breaking the "Fragility" Myth:** Instead of telling patients their "back is out" or their "disc is blown," we frame the body as a self-healing, intelligent system that is currently adapting to its environment.
- **Internal Locus of Control:** Shifting the narrative from "I need to be fixed" to "I am optimizing my communication" empowers patients to take active roles in their sensory diet, movement, and recovery.

Inviting Patients into Alignment

Language matters

- **Neuro-Semantic Impact:** The words used in the clinic can either trigger a "threat response" (nocebo) or facilitate a "safety response" (placebo).
- **From Pathology to Potential:** Replacing "wear and tear" or "bone-on-bone" with terms like "adaptive changes" or "improving communication" helps down-regulate the patient's amygdala and encourages healing.

Inviting Patients into Alignment

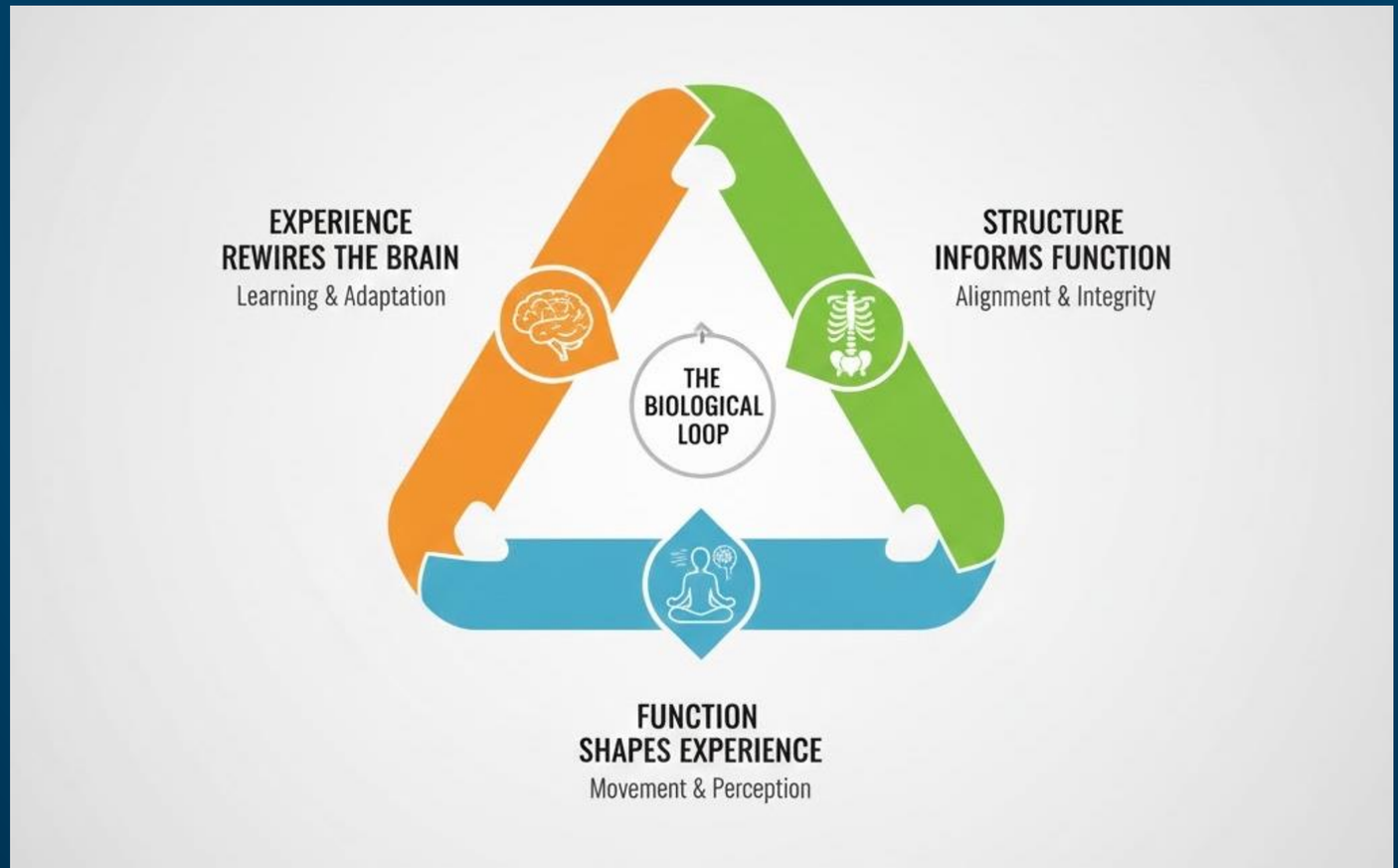
Shared Decision-Making

- **Collaborative Care:** Moving away from the "doctor as dictator" model to a partnership where clinical expertise and patient values intersect.
- **Informed Consent & Engagement**: When patients understand the why behind a neurological adjustment, their "buy-in" increases, which research shows significantly improves clinical outcomes and compliance.

Lifestyle as Partnership, Not Prescription

- **Co-Creating Habits:** Instead of giving a generic "to-do" list, work with the patient to identify which lifestyle inputs (sleep, movement, or stress regulation) are most realistic for their current capacity.
- **The "Sensory Diet" Agreement**: Framing lifestyle changes as "fuel" for the work being done in the office, rather than a list of "shoulds" that creates guilt.

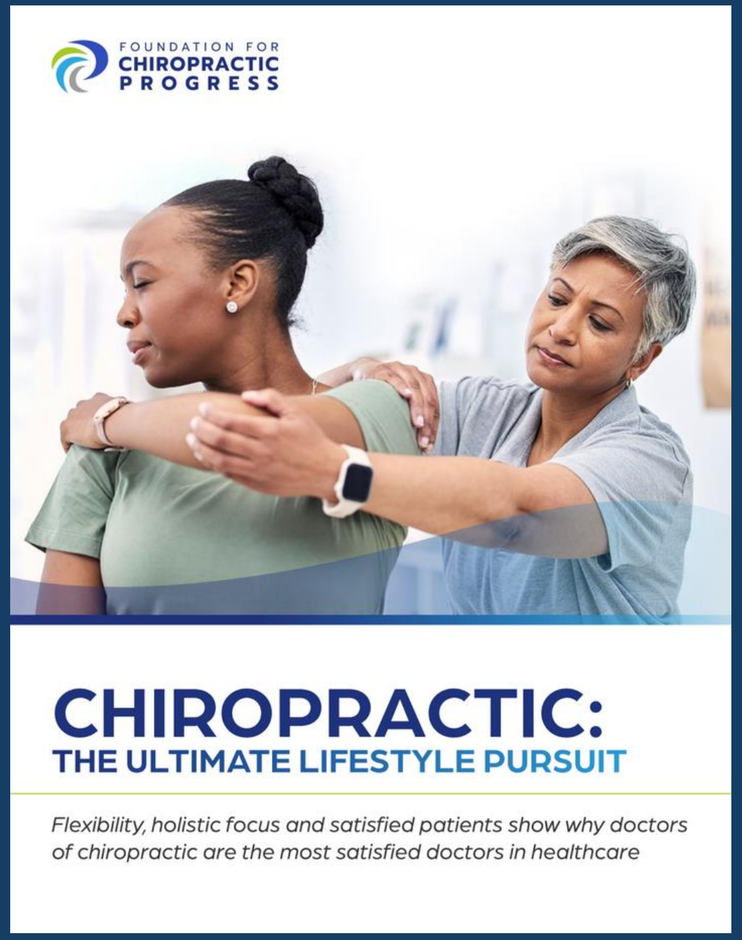
Neural Integrity Is the Blueprint for Resilience

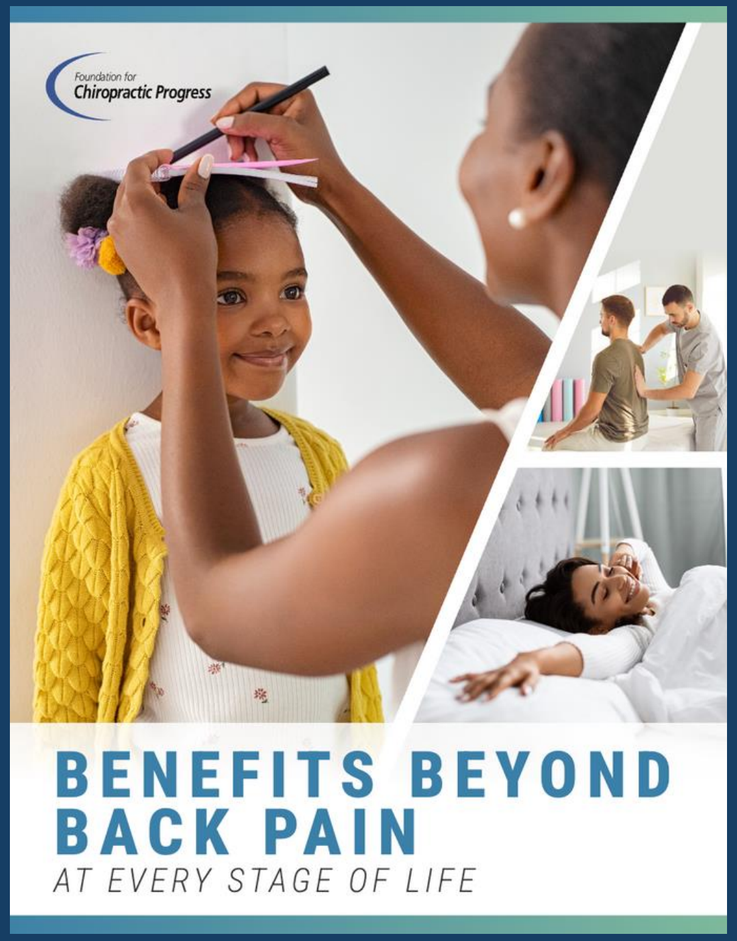


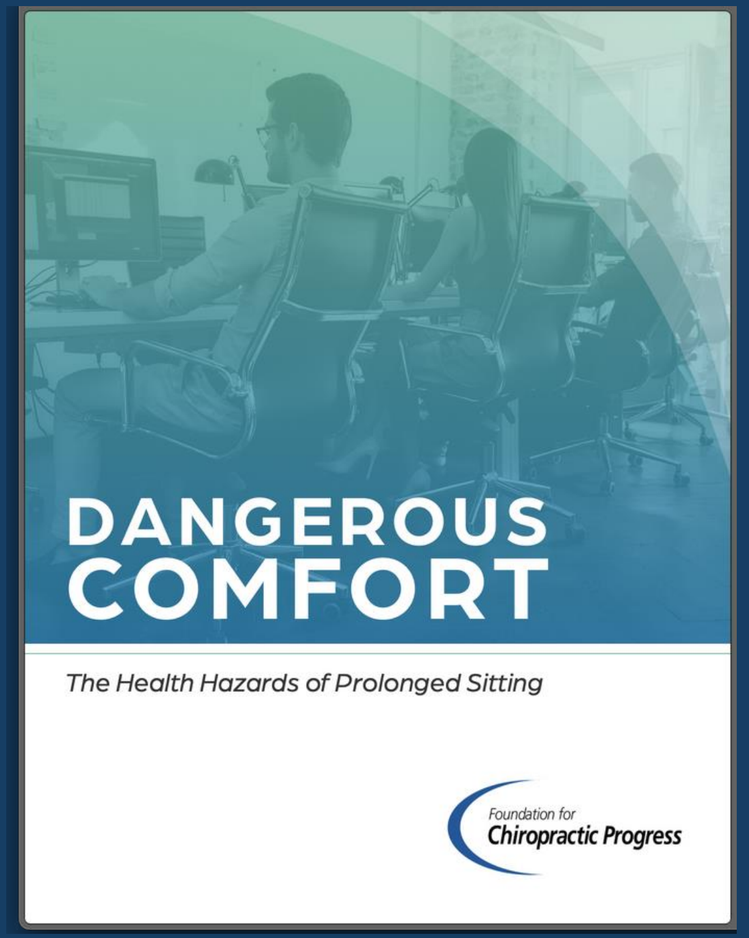
Clarity. Continuity. Coherence.

- **Care that Adapts with the Patient**
  - From pediatric development (building the neural map) to geriatric care (preserving the map), chiropractic care scales with the patient's changing biological needs.
- **Chiropractic as a Stabilizing Force in Healthcare**
  - In a fragmented medical system that often treats symptoms in isolation, the chiropractor focuses on the Central Processor that coordinates all those parts.
- **Whole-Being Health is Not an Add-On — It's the Future**
  - Modern science is proving that the brain, gut, spine, and emotions are a single integrated loop; "Whole-Being" health is simply the recognition of this biological reality.

F4CP Resources







Adjusted Reality Podcast

Adjusted Reality Podcast

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Host Dr. Sherry McAllister

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Estimated listeners

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Avg Length 44 min · **Format** Long form

Adjusted Reality Podcast: Season 10

FOUNDATION FOR CHIROPRACTIC PROGRESS

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Dynamic Chiropractic
THE AMERICAN CHIROPRACTOR — MAGAZINE OF THE CHIROPRACTIC PROFESSION

New York City Fashion Week

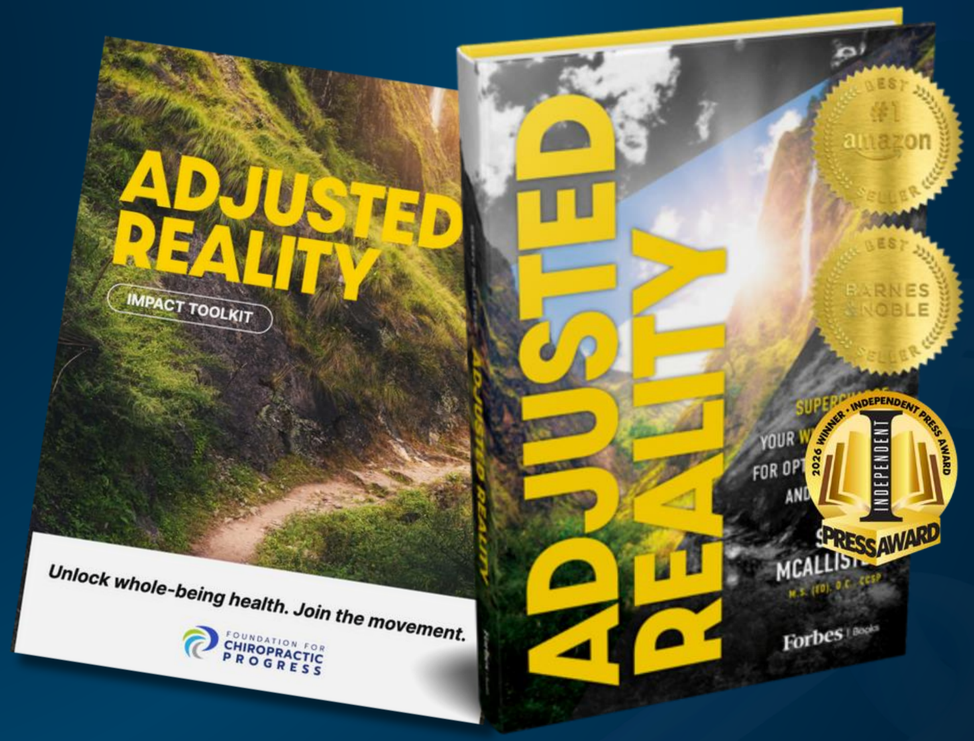
- *Incite Awareness*
- *Good Posture is Always in Style*
- *Boost Confidence*

“Supports Whole-Being health”

Your Roadmap to Mastery: The "Adjusted Reality" Toolkit

- **The Framework:** Use the book's "Foundational Seven" pillars (Nourishment, Movement, Adjustment, etc.) to structure your new patient consultations.
- **Community Bridge:** Use it as a talking point for local book clubs, legislators, and interdisciplinary referrals to explain the "Adjusted Reality" of modern healthcare.
- **The Toolkit:** Your Documentation & Marketing Engine
- **Find-A-Doctor Directory:** Ensure your profile is updated with your new "Whole-Being" focus so patients searching for holistic longevity can find you first.
- **Download the "Adjusted Reality" Toolkit**
- **Join the Movement**

F4CP



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Let's Connect!

Dr. Sherry McAllister

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Thank You

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FOUNDATION FOR CHIROPRACTIC PROGRESS