

Principles of Chiropractic
(It's Time for a Part II Board Review!!)
Dr. David Browning

Part II, Principles of Chiropractic Breakdown

PRINCIPLES OF CHIROPRACTIC

I. The Chiropractic Paradigm (12%)

- Early concepts
- Research and evolution

II. Concepts of Subluxation and Spinal Lesions (28%)

- Proprioceptive insult / somatosomatic reflex models
- Neural compression / traction models
- Visceral reflex models
- Vascular insufficiency models
- Axonal aberration / trophic models
- Neuroimmunomodulation models
- Biomechanical models
- Other

III. Basic Science Concepts in Chiropractic (30%)

- Anatomical
- Pathophysiological
- Biomechanical

IV. Applied Chiropractic Principles (30%)

- Subluxation etiologies
- General effects of adjustment and manipulation
- Wellness

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Part II, Principles of Chiropractic Sources

- ❖ Gatterman, M. (Ed.) (2005). *Foundations of Chiropractic: Subluxation* (2nd ed.). St. Louis: Elsevier Mosby.
- ❖ Leach, R. (2004). *The Chiropractic Theories: A Textbook of Scientific Research* (4th ed.). Baltimore: Williams & Wilkins.
- ❖ Panjabi, M. & White, A. (2001). *Biomechanics in the Musculoskeletal System*. New York: Churchill Livingstone.
- ❖ Redwood, D. & Cleveland, C. (Eds.) (2003). *Fundamentals of Chiropractic*. St. Louis: Mosby.
- ❖ White, A. & Panjabi, M. (1990). *Clinical Biomechanics of the Spine* (2nd ed.). Philadelphia: J. P. Lippincott Company.

How to Take The National Boards

Keep your perspective

The "Ten Commandments"

- much of this works for any test...
- There is a "cycle" to the tests

The Ten Commandments

1. Don't check your brain at the door
2. Dress in layers
 - you never know what the climate will be in the testing area
3. Eat an early breakfast
 - about an hour before the test (your brain needs "brain food")
4. Sleep is a weapon - BE ARMED AND DANGEROUS
5. If you don't have a clue, skip the question and move on...come back later... DO NOT WASTE TIME.
6. NEVER change an answer ...unless GOD tells you to

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7. Use your lucky pencil, socks, gun, etc..
 - Whatever it takes to *feel* comfortable
8. When in doubt, eliminate the answers down to 2 possibilities...guess if you have to. (a 50% chance means a monkey could pass...)
9. RE-READ #6
(6. NEVER change an answer.....)
10. Read the questions and underline the key words.
 - Read the last line first on long questions, find out what they're asking - avoid eating "word salad"
 - Sometimes reading the answers after reading the *last line* helps....
 - The Past is Prologue

❖ **Pre - Chiropractic Forerunners**

- Ancient Cultures
 - Greeks, Romans, South American, Native American, etc.
- Bonesetters - Sir Herbert Barker
 - Hx used to demonstrate the long standing depth of resentment against anything outside organized medicine (New Zealand 1979)
- Magnetic Healing
 - Osteopathy & A.T. Still
 - Chiropractic & D.D. Palmer

The Past is Prologue

❖ **Chiropractic History**

- D.D. Palmer - "The Founder"
 - Tone
- B.J. Palmer - "The Developer"
 - MOPI
 - The BJ Palmer Research Clinic (1935 - 51)
 - WOC & WHO
- Solon Langworthy
 - Subluxation
 - Modernized Chiropractic (Langworthy, Paxson & Smith)

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- C.O. Watkins
 - Researcher in the 1940's (NCA affiliation)

- Willard Carver - "The Constructor"
 - Palmer family friend...lawyer & later D.C.
 - Called school "The Science Head"
 - Authored 18 books...

- John Howard
 - National College of Chiropractic
 - Started in the Ryan Building
 - Moved to Chicago - became primary broad-scope school after being sold to an M.D. in 1914 (mixers)

- Tullius Ratledge
 - Ratledge College of Chiro - sold to Carl Cleveland in 1951
 - Key figure in California licensure

Déjà vu Review

❖ Chiropractic History

- Philosophy as a defense...
 - Shegataro Morikubo
 - Vocabulary / our lexicon

- Models of Subluxation
 - Faye - 5 Component
 - Lantz - 9 Component
 - Kent - 3 Component
 - Harrison - Postural
 - Dysafferentation

The Crib Sheet

Inflammation Hypothesis

Segmental Dysfunction Hypothesis

Fixation Theory (Korr)

Fixation Theory (Gillet)

Instability Hypothesis

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Immobilization Degeneration Hypo.
Neuropathology Hypothesis
Axoplasmic Aberration
Neuroimmune Hypothesis
Somatoautonomic Reflex Hypothesis
Spinal Reflexes
V.B.A.I. (V.B.I.) Hypothesis
Myelopathy Hypothesis
Dural Torque
Proprioceptive Insult
Somatic Visceral Disease Mimicry Hypothesis

Déjà vu Review

- ❖ Inflammation Hypothesis
 - Pre-stages spinal lesions
 - SHLRP
 - Acute vs. chronic
 - Immobilization initiates inflammation
 - VSC phase 1

- ❖ Segmental Dysfunction
 - Neurobiologic Subsets
 - Non-inflammatory
 - Korr
 - Patterson - Steinmetz
 - Inflammatory
 - Gatterman - Goe
 - Mense
 - Dvorak
 - Evins

- ❖ Segmental Dysfunction
 - VSC phase 1
 - All lead to segmental facilitation

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❖ Instability Hypothesis

- Medical x-ray criteria
- Why did you take those films, doctor?
- Etiology - posture, trauma
- VSC phase 2
- Terminology
 - Intervertebral subluxation

❖ Immobilization Degeneration

- Use it or lose it...
- Immobilization leads to permanent impairment
- VSC phase 3
- Sandoz & Kirkaldy - Willis models
 - Look them up if you need to in Leach's book, Chapter 1

❖ Neuropathology

- Electrical Stuff
 - ↓ conductivity, ↓ amplitude of action potentials, ↓ nerve transmission, ↓ frequency of firing, etc...
- LMNL S & Sx's
 - ↓ DTR's, Paresis, Flaccid paralysis, Hypotonia, Paresthesia, Fasciculations

❖ Axoplasmic Aberration

- Protein Stuff
- Pain "movement"...
- Axoplasmic Flow (generally ssssslow)
 - Antegrade (faster)
 - NGF (nerve growth factor)
 - Retrograde
 - NGF
 - Reg. of enzymes in neurotransmitter synthesis

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- ❖ Neuroimmune Hypothesis
 - Immune Stuff
 - Hans Selye
 - General Adaptation Syndrome
 - Alarm, Resistance / Adaptation, Exhaustion
 - Stress Induced Immune Suppression

- ❖ Somatoautonomic Reflex Hypothesis
 - Central Modulation
 - Descending inhibition
 - Peripheral Modulation
 - Peripheral bombardment
 - Most widely accepted hypothesis

- ❖ Spinal Reflexes
 - It's all in the name...Cause → effect...
 - "Mini-cases" / scenarios are usually presented
 - Somatosomatic
 - Somatovisceral
 - Viscerosomatic
 - Viscerovisceral

- ❖ Vertebral Basilar Insufficiency
 - Drop attacks
 - Most incidents in the early 30's
 - VSC phase 2 instability
 - Bizarre list of symptoms possible - can be intermittent
 - Note the CVA list on the crib sheet

- ❖ Myelopathy Hypothesis
 - B.J. Palmer
 - aka cord compression, compressive myelopathy
 - UMNL S & Sx's
 - spastic paralysis, hyperreflexia, pathological reflexes, clonus, paresis

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- SIDS
 - Torticollis - 1° indicator of a SDF in kids
- Upper cervical technique / compromise

- ❖ Dural Torque
 - Upper cervical model (initially)
 - Concept of meningeal torsion
 - Boards: typically an alternate answer for an upper cervical based question
 - e.g. Myelopathy hypothesis S & Sx's

- ❖ Proprioceptive Insult
 - "Absorbed" into the SAR Hypothesis
 - "Mechanoreceptor Funk"
 - Post traumatic / surgical aberrations
 - Altered biomechanics

- ❖ Congenital anomalies may predispose..
 - Hemi-vertebra, congenital fusion, etc.

- ❖ Somato Visceral Disease Mimicry Hypothesis
 - 1° Proponent = Nansel & Szlazak
 - Counterpoint to the SAR hypothesis
 - Insufficient data...
 - Interesting possibility
 - Nansel was one of my instructors....